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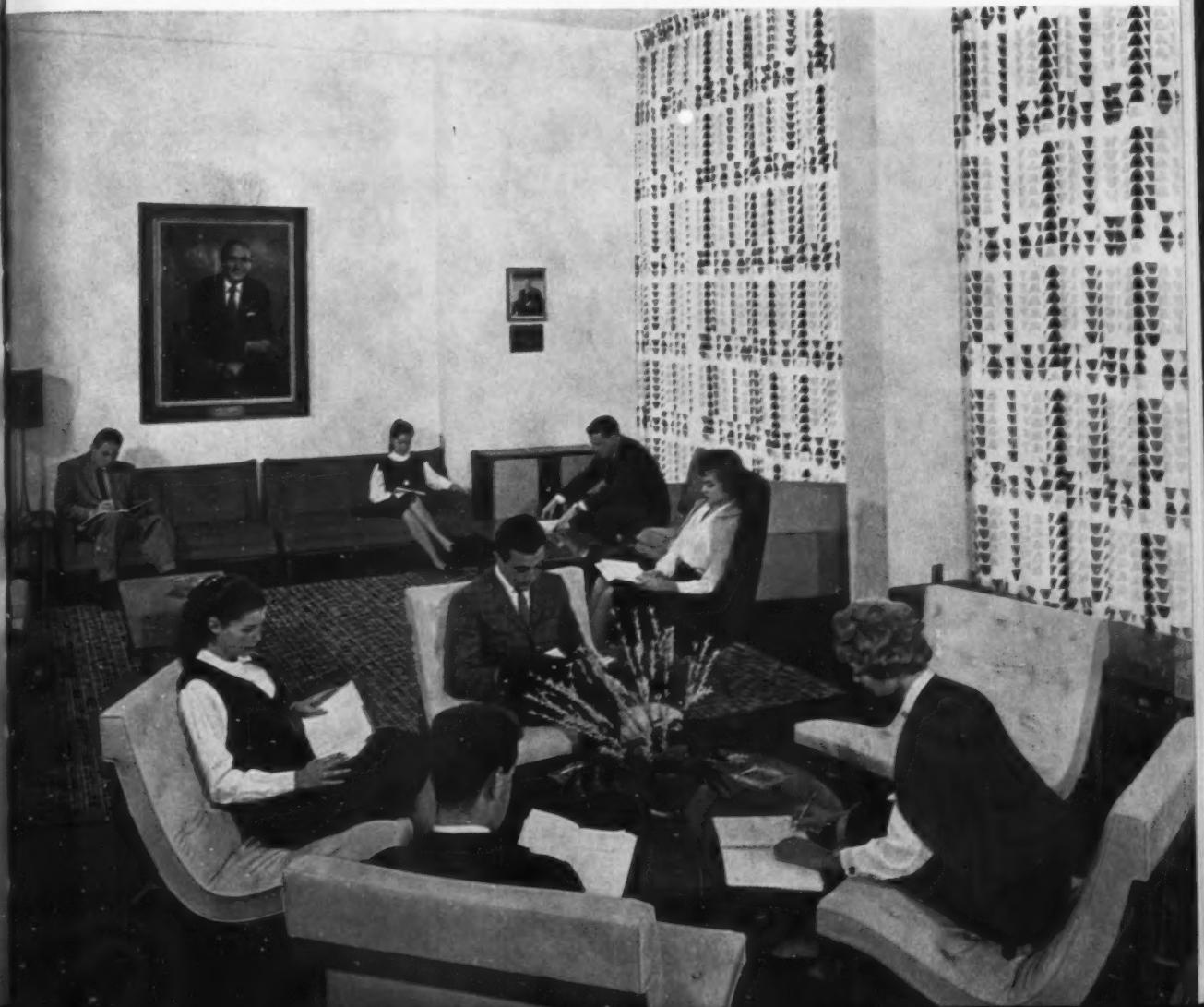
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Physical Plant Automation

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LOBBY, ZECKENDORF CAMPUS, LONG ISLAND UNIVERSITY, BROOKLYN, N. Y. (page 39)





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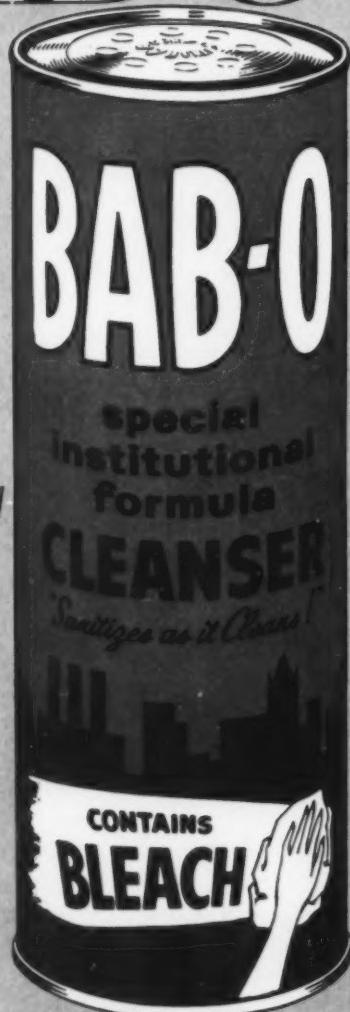
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QUESTIONS AND ANSWERS

Secretarial Pool

Question: We are considering the establishment of a centralized secretarial pool in order to make secretarial service available to faculty members. Can you tell us whether the idea is practical? — K.R., Mo.

ANSWER: Providing secretarial service for faculty members is an evolutionary process that will produce ever new judgments based on changing faculty needs.

Many colleges have started from the point of "then there were none" and progressed to a central stenographic pool and then to departmental secretarial service. This transition is due not solely to the principle of Parkinson's Law; frequently it has been due to a poorly organized central stenographic service.

There is little doubt that in most colleges a central stenographic pool is a desirable development. It is almost certain that the availability of such service will increase scholarly papers and research studies.

Furthermore, the whole system of higher education feeds on a great number of committees and committee reports to be processed through the stenographic pool.

When stenographic service is provided you will discover that what formerly may have been a handwritten memorandum, when dictated becomes a document. Committee minutes once written in a committee book and kept by a committee secretary will become dictated minutes, with typewritten copies to go to all committee members and perhaps to some administrative offices.

Terminology creates images. The image of a typist is that of a girl at a machine. The image of a secretary is that of a semisocial asset on which an executive depends but not for a constant work load.

If my terminology comments are valid (and I believe they are), then here are some suggestions:

1. Don't call it a central stenographic pool — call it a typist pool. Typists are what you actually need, and more can be made available at peak loads for part-time work.

2. Purchase dictating machines for each educational department or office using the typist pool and have a deposit center for the records on tape. Give constant emphasis to the statement "no secretaries for dictation," and have one or more dictating machines available at the typist pool offices.

3. At the headquarters for the typist pool, provide several small 6 by 6 foot cubicles with one desk and chair for faculty members to use for reading copy, signing letters, and so forth, *but no dictating except to machines*.

4. Establish a policy that the committee secretary only gets copies of committee minutes. The growing practice of giving copies to everyone costs considerable time and paper. Ultimately it produces requests for files so that desk drawers are not clogged with reports given but not needed.

5. Buy adequate and versatile copying equipment.

6. Be prepared to turn out letters the same day the dictation is received (before noon). Try to turn out all work within 48 hours.

If the service meets these requirements, there is no reasonable cause for any educational department to ask for a departmental secretary to get needed service. — JOHN N. SCHLEGEL, treasurer, *Lafayette College, Easton, Pa.*

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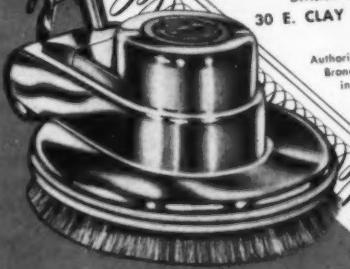
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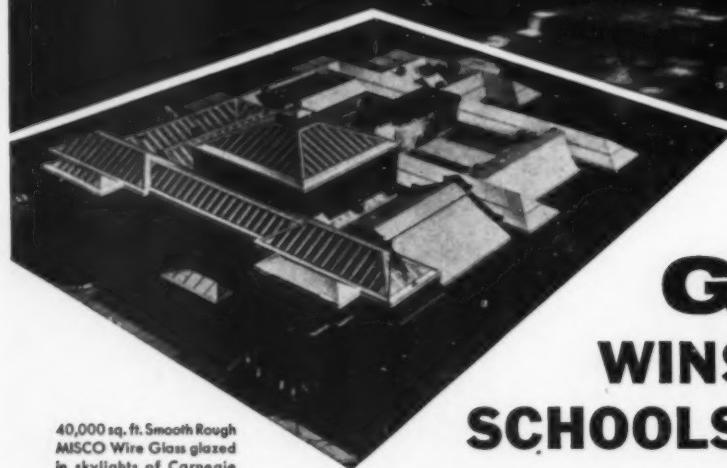
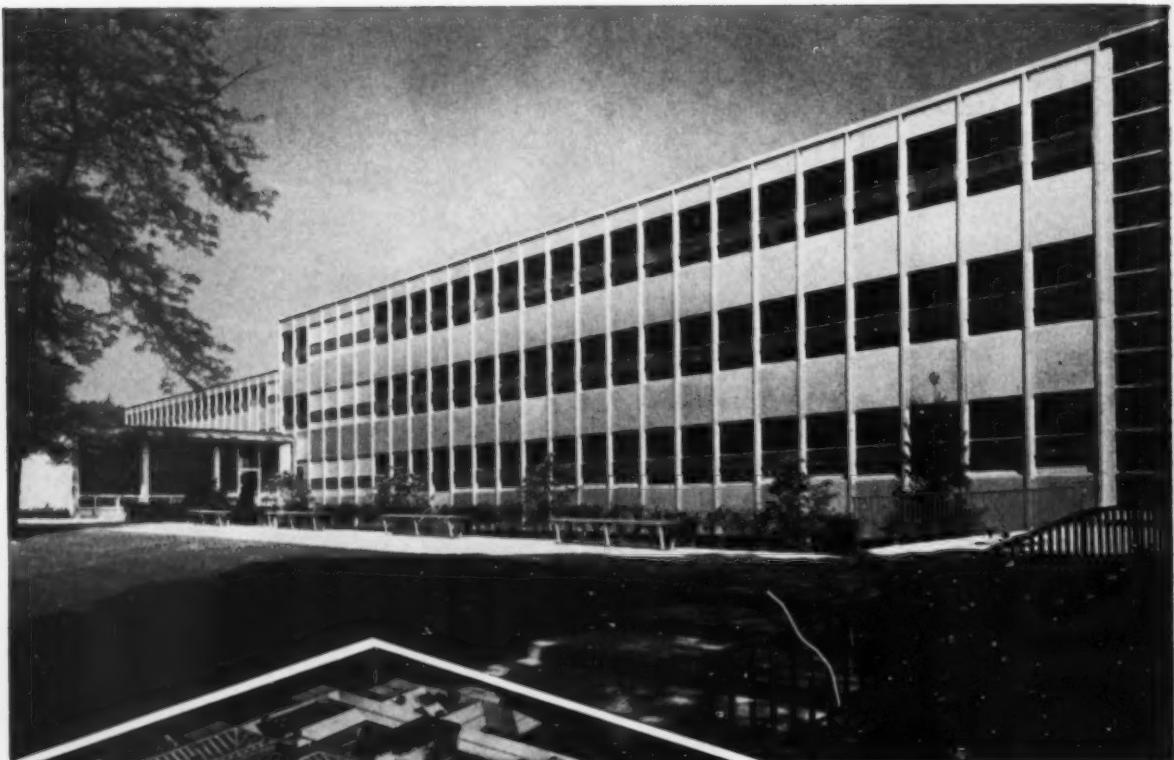
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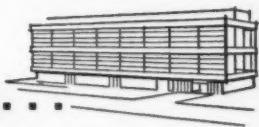


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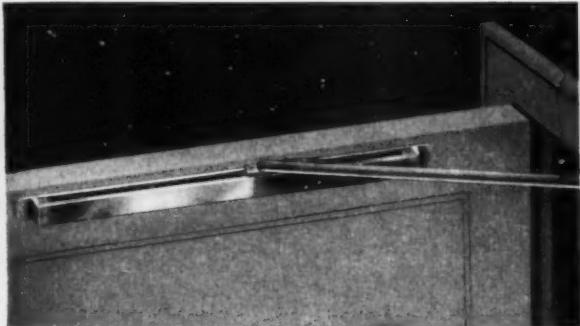
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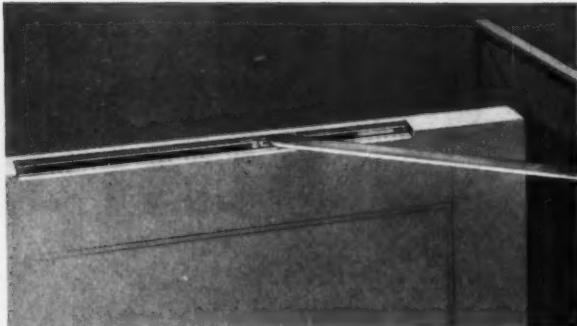
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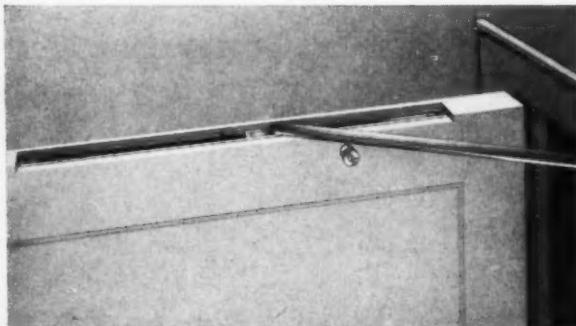
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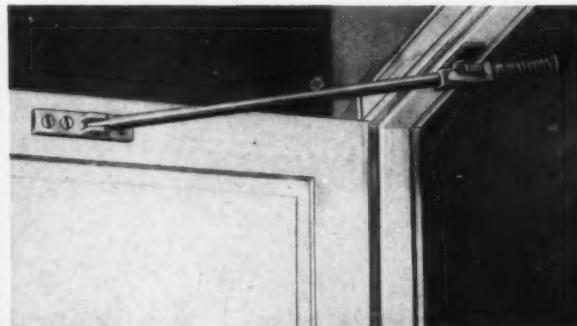
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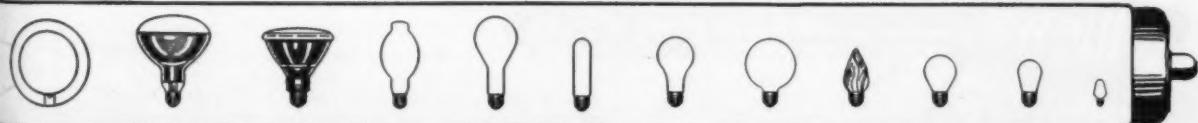
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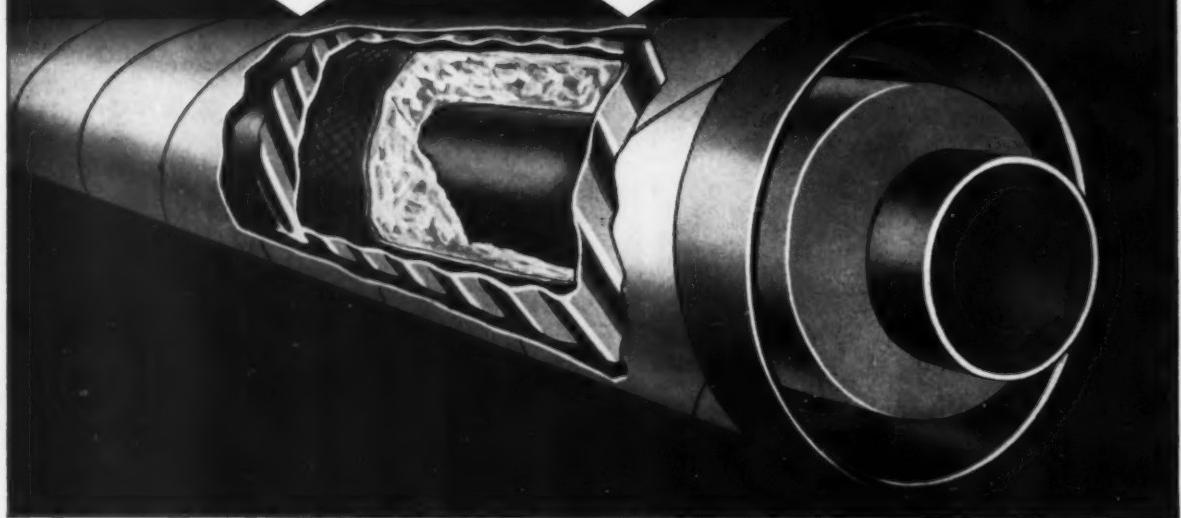
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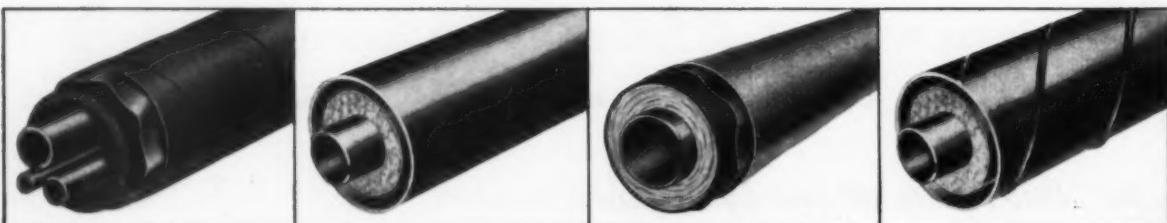


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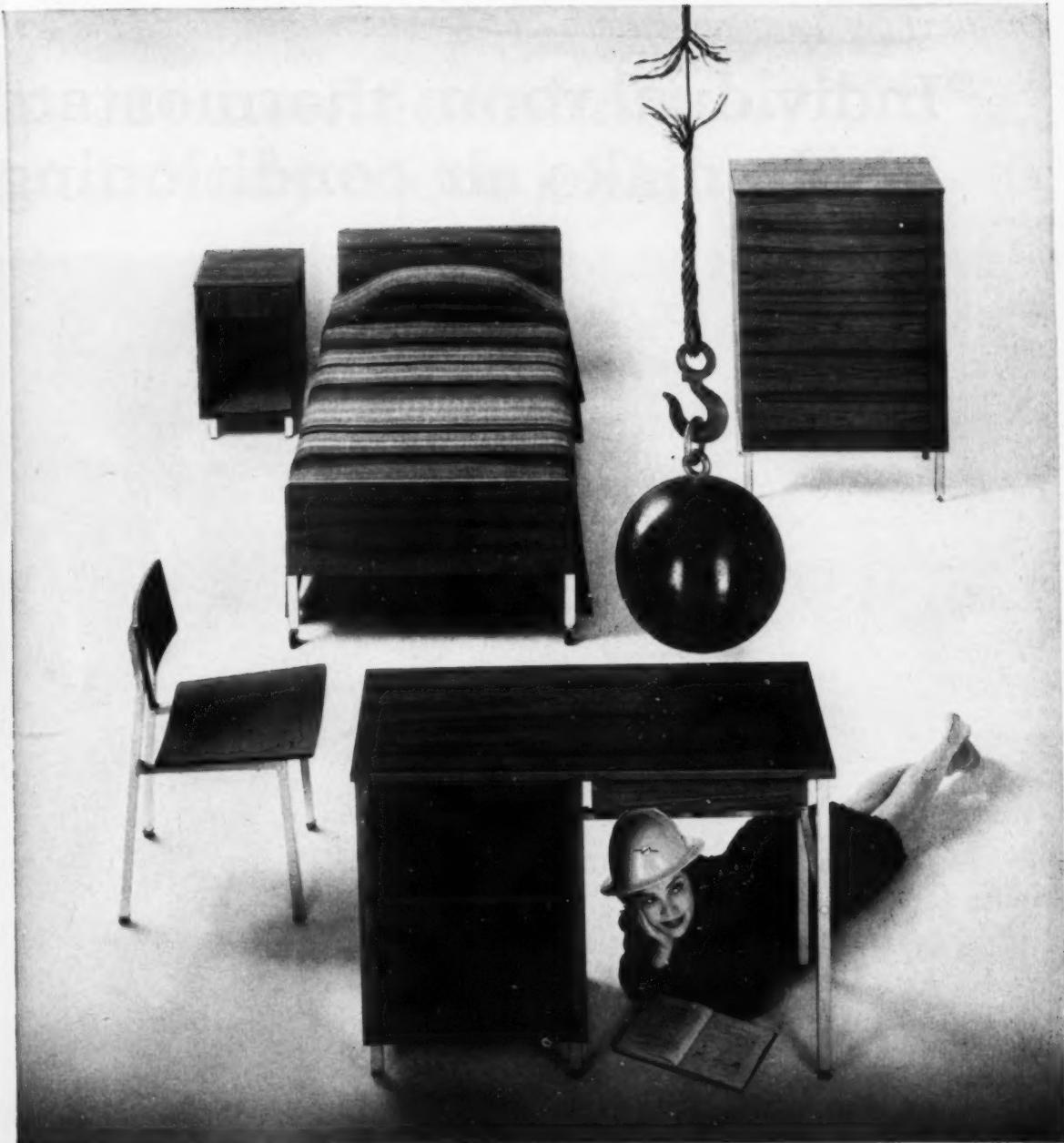


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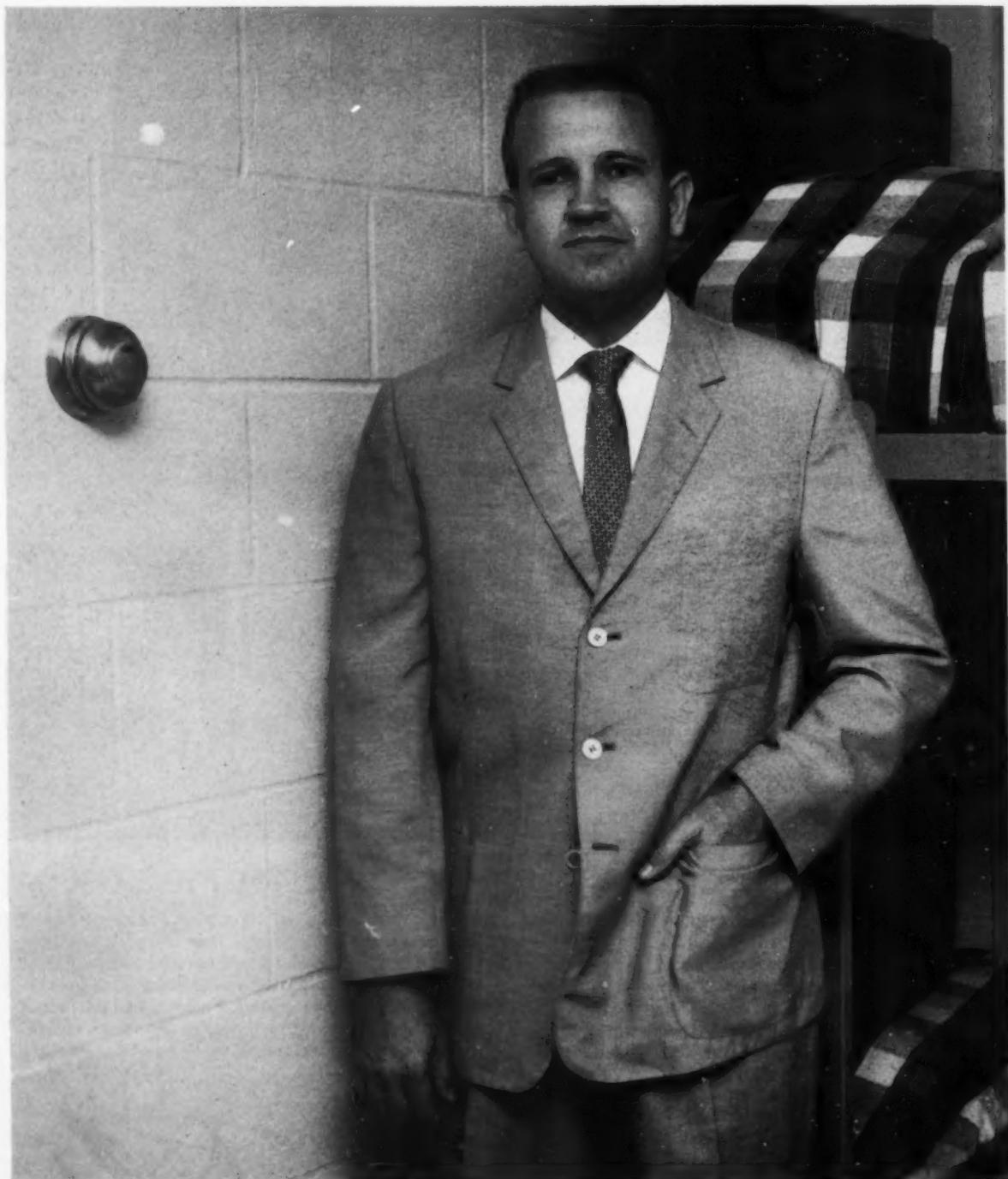


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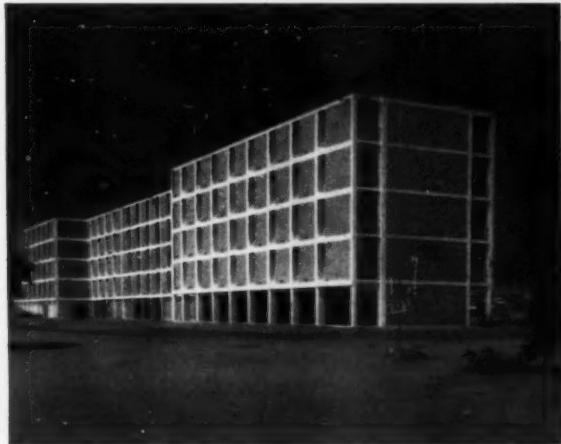


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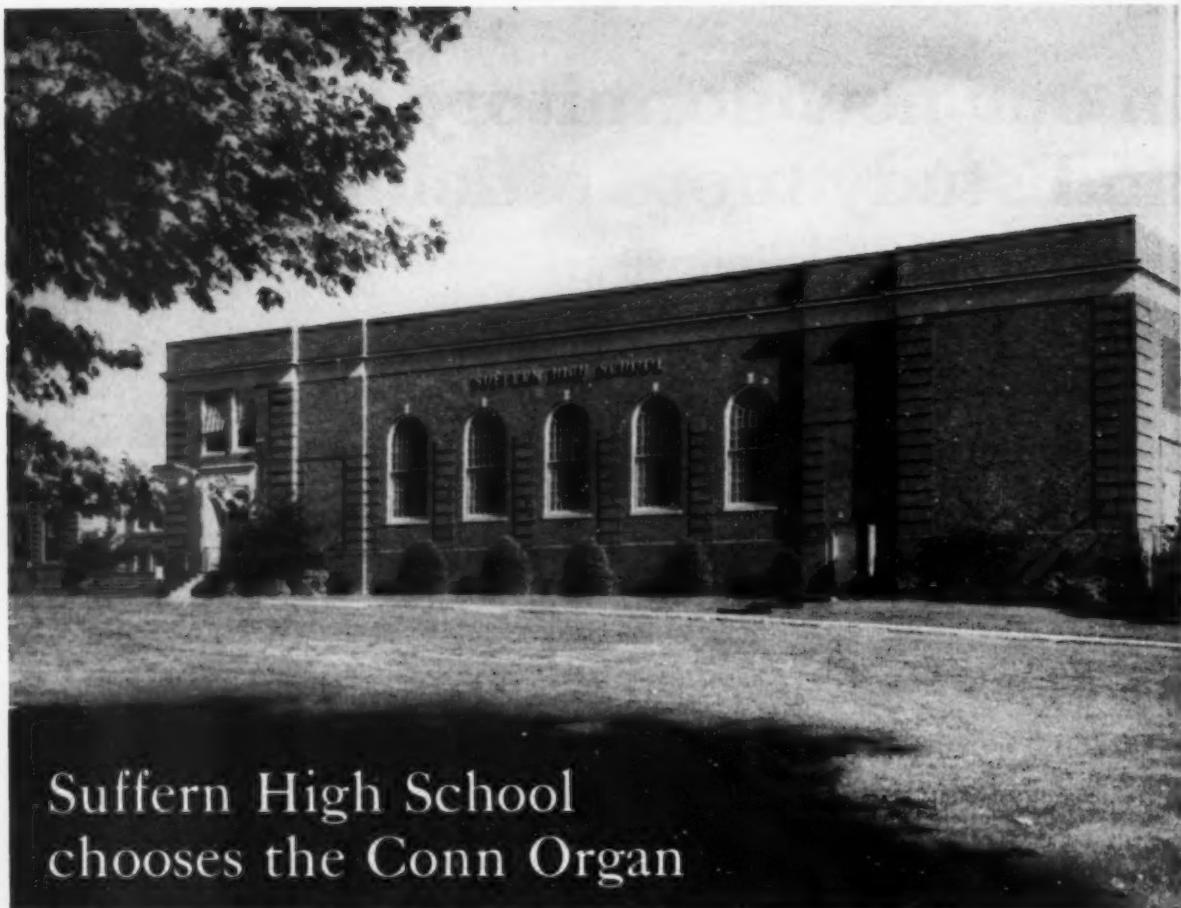
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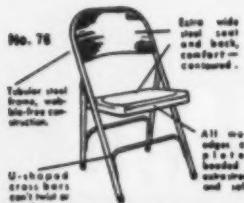
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DECEMBER 1961

Christmas Shopping List

FROM time to time it has been suggested in these columns that the average college business manager has been a little short on his professional reading. "Show me the man who reads, and I'll show you the man who leads." The following publications should be of interest to college administrators:

Business Managers: One of the new publications just off the press with which the business officer should be familiar is "New Spaces for Learning," a report of a research project conducted by the school of architecture, Rensselaer Polytechnic Institute, Troy, N.Y. The basic premise of this report is that the optimum use of the new instructional aids and media requires new concepts of space types and their design. The studies are in no sense standard plans, but are intended to serve as guides in the planning of facilities that may be contemplated in colleges and universities. The plans make provision for the use of closed-circuit television and other audio-visual technics. The funds for the study were made available by the Educational Facilities Laboratories, Inc.

Food Service Directors: Two books should be of major interest to administrators charged with the responsibilities of food service operations. One book, "Food Service Planning: Layout and Equipment" by Lendal H. Kotschevar and Margaret E. Terrell, should be particularly helpful to executives faced with the problem of designing new food service facilities, or charged with the task of re-vamping antiquated and inadequate layouts. The book is specifically organized in a manner that will be practical for step-by-step arranging and equipping of kitchens and dining rooms in new or remodeled buildings. Dr. L. H. Kotschevar is professor, school of hotel, restaurant and institutional management, Michigan State University, East Lansing. Margaret E. Terrell is professor and head of institutional management at the University of Washington, Seattle. The design skills of the authors have resulted in both of them receiving national awards for their work.

Another book by Dr. Kotschevar, "Quantity Food Purchasing," should be valuable to food service directors. In "Quantity Food Purchasing" the entire range of foods purchased by quantity buyers is covered in the book —

fresh, canned, frozen and dried fruits and vegetables; dairy products; cereals and cereal products; beverages; spices; poultry and eggs; fish and meats.

In a complete summary of all the information needed by the quantity food buyer, this new book describes important considerations in purchasing, lists grades of food and the corresponding factors that determine them, and points out waste factors in the preparation of many foods.

"Food Service Planning: Layout and Equipment" and "Quantity Food Purchasing" have both been published by John Wiley & Sons, Inc., 440 Park Avenue South, New York 16.

Purchasing Agents: A long-awaited volume on college purchasing is now off the press. "Purchasing for Educational Institutions," published by the Bureau of Publications, Teachers College, Columbia University, New York 27, under the aegis of the National Association of Educational Buyers, will be a must item for any college administrator who has responsibility for the purchasing function of his institution. More than 10 years in production, the book represents the collective experience of several score experienced purchasing agents of educational institutions. Under the skilled editing of James J. Ritterskamp, vice president of Illinois Institute of Technology; Forrest L. Abbott, business officer of Barnard College, and Bert C. Ahrens, executive secretary of the National Association of Educational Buyers, it has been possible to produce a book that should be a constant reference for a purchasing officer. Dr. John D. Millett, president of Miami University at Oxford, Ohio, has this to say about "Purchasing for Educational Institutions":

"Many purchasing officials will find here confirmation of their own best practices. For others there is herein a guide to improvement and a source of encouragement for the better understanding of the range of procurement activity."

To quote from the book jacket: "This book provides a blueprint for the purchasing agent who is aware of today's needs for ethical as well as technical standards in all business relationships." This emphasis on ethical performance stamps the book as more than a how-to-do-it manual. College administrators would be well advised to add it to their professional library.

For Value Received

Edwin O. Siggelkow

Coordinator, Student Activities and Kirby Student Center
University of Minnesota, Duluth



IF WE are to make value education an explicit part of the extracurricular curriculum, we must organize to confront students with the need to identify their personal values and to test them against the values of others. Being confronted with the need for value judgments is our major methodology for teaching values. In the confrontation process we must learn not to shrink from conflict. The college union needs to furnish the forum for discussion and debate on all manner of issues.

One great fear I have about the college union is that the sizable investment in our buildings and the substantial moneys collected to operate our enterprises and programs tend to center too much control of all finances in the professional staff. Hence, while we try to function as helpful advisers or partners we are actually recognized as approval agents. Although some of our Canadian and Western unions are in fact owned and operated by the student body, many of us make a fiction of student control in terms of the total operations.

I favor the allocation of money for programs to be under the control of the student committees with full rights to spend it utterly foolishly and wastefully, provided only that the staff has full opportunity to advise and caution, and that standards of accountability for misappropriation of funds are required. Conversely, the staff should retain explicit control of operational finances and management bound only by the obligation to furnish the information desired and needed by students and to consult with them on important changes in operational policy, major expenditures, and building changes. Neither the students nor the staff can be truly responsible if they do not in fact bear responsibility for their actions and for their inactions.

I suspect the student-at-large would shortly recognize he is not at the bottom of an impossible hierarchy and would make known his evaluation of student committee and staff decisions if there was more explicit knowledge of the areas in which each took full responsibility. I think student leaders too frequently get out from under attacks from their fellow students by saying that the administration actually decided a given controversial issue. Or, they may equally frustrate the

student-at-large by reciting the staff's thinking on an issue as if it were their own, but which obviously lacks the conviction of being their own.

In our programs we need to adopt a leadership role and urge the creation or expansion of programs that provide an opportunity for the university community to face value conflicts openly and with rational maturity. We should exploit conflicts and "milk" them for all the learnings possible. We need to be less concerned with running a "tight, smooth sailing ship" and more concerned with a frank airing of the questions that divide our campus and our nation. We must counteract the largely calm atmosphere of the classrooms and provide for the clash and give-and-take of different disciplines and points of view within the extracurriculum. As our faculty is pressed to teach more and larger classes, to rely increasingly upon objective, machine scored examinations, and to meet with more and more advisees, I fear the opportunity for give-and-take will become even more restricted within the academic, classroom seating.

We should view ourselves as agents in the process of social-cultural change. *Status quoism* should have no real part in our work. Youth is a time for questioning, for idealism, for unfettered imagination. Although we may find it necessary to "fetter" some imaginations, to keep essential equilibrium, and to demand some maturity, still, we should be open to suggestions for change and be prepared to reevaluate traditional procedures and policies (which we may be inclined to hope have been solved for all time).

The vitality of active participation by students in the ongoing programs and operations of our unions must be fostered. To help each student to find his base values or beliefs, we need never identify explicitly to him that we are presuming to teach values. Values will be developed through participation and they will not be universal in character. Each student will bring different beliefs to the learning situation; each will take away different learnings and changes in his value orientation to life.

Much of what I have said is paradoxical. It is in paradoxes that the answers to our hardest human problems must be sought.

IT WAS President John F. Kennedy who said, "Today we need both wisdom and strength, and that's the reason why Americans should *wake up and read!*"

One does not have to read very far nor very deeply in the current literature on higher education to feel the crisis that is facing American education. It is emphasized by Harold W. Stoke's statement that "higher education is now compulsory when we realize that a nation cannot survive without it." Let me repeat, he did not say "live," he said "survive" without it. Coupled with this are the jumping enrollments facing us in the next 10 to 15 years.

The American public expects a miracle to be performed by the colleges and universities. Thus, it is surely clear that we shall need "strength and wisdom" to face these problems; and as business administrators we must have a full fund of the information to be found in reading.

There are three areas that may be appropriate as a reading framework for the business administrator. By providing this framework, ideas should take better shape. This may be likened to hanging a suit on a hanger rather than dropping it on a chair.

The first area is the major one and may be classified as the philosophy of higher education. In order to perform our tasks, we must know the American philosophies of education, and, in particular, the philosophy of our own institution.

The second area may be described as the "governance" or administration of colleges and universities. We must constantly improve our understanding of this field.

A final area of required reading is a study of the relationship between higher education and the federal government.

Representative articles or books from each area were chosen for this discussion. The first is an article by Eric A. Walker entitled, "A Second Look at American Education," published in *School and Society*, January 1960. He writes that during the last two years the importance of higher education probably has been more energetically advanced by more people than at any other time in recorded

history. This has been triggered by the realization that the flood tide of students would one day be ready for college, by the shortage of engineers and scientists, and by the Russians launching their first Sputnik.

Teachers and administrators have joined in the debate which has centered around the topics of quality *versus* quantity, sciences *versus* humanities, the three R's *versus* progressive education, public *versus* private support. Over all, the debate has been marked more by prejudice than by knowledge, more by opinion than by fact.

It is time to take a second look, to find out what the debate has so far

often can make his contribution by providing resource information, serving as a sounding board, and bringing his array of knowledge to the problem.

The general organizational structure of colleges must also bear scrutiny. In the "Governance of Colleges and Universities," McGraw-Hill Book Company, 1960, John J. Corson writes that the achievement of success by the colleges and universities in bringing about the miracle expected by the public, or at least part of that public, will require great improvement in college administration.

As Logan Wilson has pointed out, it is high time that the college or

If the business officer hopes to make a vital and important contribution to the solution of the problems of higher education, he would do very well to . . .

Wake Up and Read

William W. Force

Dean, Financial Affairs, Alameda County State College, Hayward, Calif.

produced, to find out where we are and where we wish to go and, primarily, to come to some solid decisions about what we teach, how and to whom we teach it, and how much we should support the teaching of it.

In our society we need a diversified system of education and we must develop a concept that permits each institution to be measured and evaluated in terms of its own objectives and aims. Unless we do this, we shall force our institutions of higher learning into a single mold, or some institutions will bear the stigma of inferiority. Neither of these can we afford. This conflict in education is a real one; and the business officer

university be subjected to the same intensive analysis that is brought to bear on business and industrial enterprises. This does not imply that the college or university should administer its affairs in the same manner as a business firm, nor is good administration necessarily reflected by a tightly coordinated system of activities. Rather, good administration is better reflected by a capacity to keep an eye focused on basic ends and adapt activities to the attainment of such ends. Unless the colleges do this for themselves, there will be others who will make loose generalizations about administrative efficiency, founded on the comparison with busi-

From a paper presented at the Western Association of College and University Business Officers, Portland, Ore., 1961.

ness enterprises and other governmental agencies.

Mr. Corson points out that within the past two decades, students of administration have recognized that the process of decision making is at the heart of administration. Decision making in the academic world requires discovering the role of governing boards, the president, the administrators, and the faculty. There is friction between institutional administrators and faculty, largely because faculty members adhere to a cause greater than their institution. They have a professional allegiance to knowledge and intellectual freedom that supersedes their institutional loyalty.

Recently, a new president of a college told of his shock in discovering that he was the only man on the campus concerned with the whole institution. He decried the divisive influence of faculty members with intense specialization in particular fields. Administrators are more institution oriented. This results, according to Mr. Corson, in an institutional weakness, namely, lack of an institution-wide sense of destiny or purpose to guide decision making and coordinate participants.

The achievement of the colleges and universities in meeting the challenge of the Sixties will require greater understanding in how each of the participants — trustees, presidents, financial officers, deans, department

heads, and faculty — can best make their individual contributions. It occurs to me that the role of the college business manager is unique in college administration. The college business officials, probably, next to the president, are concerned more with the whole institution in all of its ramifications than any other individual. It is here that business management may make a real contribution through the coordination and implementation of the decision making processes, particularly in budget making.

The business manager should make himself aware of the current flux of the theory of administration. During the last 10 years, a basic change in the point of view of organization and administrative procedures has become increasingly evident.

According to Herbert A. Simon in his book, "Administrative Behavior," the Macmillan Company, 1960, the idea of the economic man who is totally rational must give way to the realization that people are not entirely rational in their behavior. He says it is impossible for a single isolated individual to reach any high degree of rationality in a decision because the number of alternatives he must explore is so great. Even an approximation to objective rationality is hard to conceive.

To achieve rationality, the decision should be made at the point closest to the problem. As the distance be-

tween the most intimate knowledge of a situation and the decision becomes greater, irrationality sets in, coupled with the chain of expense and delay in communicating and carrying out the decision. Business management must take to heart the lessons in more modern thinking. Decisions of varying magnitude constantly plague business management, and unless there is proper organization, the office is engulfed in a mass of detail that constantly impedes its greater contribution to the instructional program.

Finally, the importance of the federal government in higher education is excellently reported in "American Universities and Federal Research," by Charles V. Kidd, Harvard University Press, 1959. Mr. Kidd states that federal research funds have become so large a part of university income that they have a strong influence on every aspect of university policy. While the government may have threatened constantly to distort universities by giving more emphasis to applied or developmental than basic research, a remarkable process of mutual adaptation has kept the threat potential. Federal research funds have affected not only the research aspects in universities, but all of their educational functions. For the long run, the effects of these funds on educational functions of the universities may be more significant than on research.

The effectiveness with which the university bargains for suitable terms and conditions is in fact the major protection of its independence. There seems little doubt that college business management must take its role in bargaining, contractual arrangements, and administration of funds in order that federal funds may play a proper part in maintaining the integrity of the collegiate institution.

This report would not be complete without calling attention to the well written article by Harvey Sherer in the April 1961 issue of COLLEGE AND UNIVERSITY BUSINESS. He lists and describes the many valuable references applicable to college business management furnished by the Office of Education.

If the business officer hopes to make a vital and important contribution to the solution of the problems of higher education, he will do well to heed the advice: *Wake up and Read!*

**Business managers should be aware
of the current flux of theory of
administration. A basic change in
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and administrative procedures has
become increasingly evident today**

What Happened to Federal Aid?

Why did the proposal for expansive education aid fail?
Were there other factors, beside the differences of
opinion over the religious aspects, that had a bearing?

Lloyd Morey

President Emeritus and Former Comptroller, University of Illinois, Champaign

SOME time before adjournment, the recent session of Congress disposed of one of the most controversial and most argued proposals in legislative history — the expansive program of federal financial aid to education strongly urged by the present Administration. The maze of conflicting opinion, and the strong emotional outbursts engendered by this proposal, make it difficult, in spite of wide publicity to the discussions, to determine the basic facts as well as the real reasons why the Administration's recommendations were so largely rejected. Because of their significance for future reference, a brief review of the fundamental issues involved seems appropriate.

It is rather widely believed that differences of opinion over the religious aspects of the program had a major bearing on the results. Is this the case, or were there other factors and elements that were of equal or greater importance and effect? Probably no subject before Congress in recent years was the object of as much strong administrative and party pressure and maneuvering and as much heavy propaganda and lobbying as this program. Why then did it fail?

No one objects to the principle of educational opportunity, and the importance of providing the facilities to

carry out this obligation. The argument was on the question of who should pay for it, and who should control it. These two questions are inseparable, because in spite of all assurances and reservations to the contrary, whoever pays the bill calls the signals.

The program covered both *schools* and *higher education*, in about equal proportions. The strongest argument, however, came over the former. On the question of aid for schools, the arguments for federal aid were (1) that the schools have not kept abreast of their load nor of needed educational quality, (2) that sufficient facilities and adequate teachers' salaries have not been provided by the states and local communities, and (3) that these agencies cannot meet the mounting load of the decade immediately ahead.

These claims were all clearly disproved by reliable and unbiased information presented during the discussion. It was brought out that (1) while there are some deficiencies and some variations, states and communities have met the demands generally well by major increases in plant facilities, by material improvement in teachers' salaries, and by steady improvement in programs. Financially, their budgets increased during the

1950 decade much more than enrollments; they increased teachers' salaries, and they raised \$14.7 billion for plant additions and improvements. More than 99 per cent of their funds came from state and local revenues.

There will be further increased load in the 1960 decade; but the rate of increase will be less, and the required increase in budgets will be less in percentage than in the previous decade. Studies of revenue potentials indicate conclusively that the overwhelming majority of states and local governments can meet their own financial requirements without outside assistance.¹ Their financial status in most cases is far better than that of the federal government. Less than 1 per cent of the 40,000 school districts has reached the limits of bonding power, and few states have exhausted their revenue or bonding possibilities. The need for federal help is by no means established.

Many feel there are other ways in which the financial strains of the schools may be alleviated, that there are weaknesses which merely more money will not cure.

One of the strong points of opposition to the aid program was the

¹Freeman, Roger A.: *Taxes for the Schools*, Institute for Social Science Research, Washington, D.C., 1960.

The fear of increased federal control is appropriation of federal money without a

widespread feeling that broad financial aid from the federal government would lead to control by it of the educational program. This was resisted by the supporting groups on the grounds that federal aid in some form had existed for a long time and safeguards against such dangers would be written into the legislation. Neither argument was convincing.

Practically all financial and educational progress has been accomplished through local and state financing. It is true there were some very early land grants to the states for school purposes, but they were not appropriations. The only items of federal money were (1) grants for vocational training (1916), and (2) help in improving equipment in selected programs and in guidance, counseling and testing (National Defense Education Act, 1958). Together they represent less than 1 per cent of the nation's school bill. There has been no real experience with federal aid to schools.²

The fear of increased control is not without foundation. There can be no appropriation of federal money without some specifications as to how it is to be spent. Those who say we can have such aid without any strings

attached are either wishful thinkers or uninformed as to how government processes work. If, as is claimed, the purpose of help for education is to improve the schools or remove inadequacy, who except some government agency is to determine what is adequacy, and what must be done to obtain it? The people who write the rules control the use of the money, whether the law says so in so many words or not.

Federal Money Is Not Free

Beyond this, a major reason accepted by many unthinking people is the "myth" that federal money is free, that it is a substitute for higher taxes, that it does not cost anything or its cost will be paid by somebody else. Nothing can be farther from the truth. Every dollar appropriated by it must be provided either now or at some later time by the same people who pay state and local taxes. If this is not done now, it must be met by borrowing, which means more federal debt, more inflation, reduced purchasing power of the dollar. Inflation is the country's worst economic enemy and the greatest impediment to economic progress. We need to eliminate it, not increase it.

In this connection, a most interesting commentary was offered by Harlan H. Hatcher, president of the University of Michigan, at the 1961 meeting of the National Association of State Universities, of a kind not

often heard from educational leaders:

" . . . the federal government to which we turn so easily for the answer to our questions is the same government that has already piled up \$750 billion [funded and unfunded] debt and is paying \$10 billion annual service on it. It is so easy to forget this government gets the money right from the states represented here. (It) has no source of income elsewhere."

"It seems to me that, as responsible leaders in the field of education, while we are emphasizing science, we are not to neglect our responsibility in the field of economic thought and lose sight of the fact we are mortgaging the future of the very youngsters we are attempting to educate." (Proceedings, N.A.S.U., 1961.)

The school aid program was strenuously pushed by the National Education Association and various other employe organizations, and by the Secretary of Health, Education and Welfare. It was opposed with equal vigor by the U.S. and state chambers of commerce, the American Farm Bureau Federation, and numerous other citizen groups. It was opposed editorially by most newspapers and many magazines.³

Opposition also came from the people who are legally responsible for the schools — the elected or appointed boards of education. Not one of these

²School lunches are sometimes referred to as an example of federal aid to education, but they were started to expand markets and consumption of agricultural surplus commodities and safeguard the health and welfare of children. This activity is clearly auxiliary to education and cannot be called "aid to education" in the true sense.

³One of the best editorial reviews of the subject appears in *Fortune* for April 1961.

not without foundation. There can be no specification as to how it will be spent

ever appeared in any hearing to support such a program, and many expressed disapproval. A resolution against the 1961 plan was adopted by the National School Boards Association. Many state legislatures and governors have opposed this and other grants-in-aid programs.

In the end, however, the most effective opposition came from the voters back home. While on the face of the situation the furor seemed to be greatest over the religious questions involved, objection in principle was voiced heavily as the discussions progressed. Members of Congress saw that the majority of their constituents did not want this program. That is the major reason why the House turned it down by such a decisive majority.⁴

The only remnants of the huge recommendation approved were the continued assumption by the federal government of the added cost for which it is responsible in federally impacted areas — a very appropriate action — and the extension of the National Defense Education Act of 1958. Both of these were enacted for two years, indicating that Congress does not want to consider educational aid programs in the second (January 1962) session.

Higher education assistance made up something more than half of the

total Administration program: a new loan plan for academic buildings, enlargement of the loan arrangement for income producing buildings, and a new undergraduate scholarship system.

The main proponent of the program for higher education was the U.S. Department of Health, Education and Welfare. Various national higher education organizations supported such aid in principle but there was lack of agreement with the proposals in the bills presented. There was general unity on the need for grants (not loans as proposed) for educational facilities. Major arguments were that the major influx of enrollment increase is still ahead, and that states and private institutions individually and alone cannot meet the needs that will result from this added load. There was also much emphasis on the fact that for a century or more the federal government has been giving assistance in various ways to higher education, and this was primarily an extension of what had so long existed.

Have Been Receiving U.S. Help

The state universities of the country have for years received certain help from the federal government. Most notable was the Land-Grant Act of 1862 which stimulated the founding of many of them. But it provided grants of land and not money. Certain additional monetary aid to

instruction has been supplied continuously to them ever since. But the total is a very small fraction of their aggregate income, the states having taken over the major responsibility.

In subsequent years, much federal money has been channeled into the public institutions, but it is largely for special research or specific public services. So far as basic educational service is concerned, this has remained primarily the task of the institutions themselves and their constituents, or of the state or local bodies maintaining them.

The college housing loan program is not financial "support" in the ordinary sense, since it is only an advance of funds which are later recovered.

Federal payments for college training for veterans merely represent to institutions the recovery of charges that would normally have been made to and paid by the student. Again it is not "aid" in the ordinary meaning of that term.

The student loan program, established in 1958, has been widely used, even in the face of the large amount of institutional and private aid available. Graduate fellowships have been advantageous, but many private sources of such aid exist and are constantly increasing. Students are the primary beneficiaries of such assistance.

All this means more and more federal administration, more and more routine and procedure, more and

⁴For an excellent brief review of what happened in this respect, see Raymond Moley, End of the Grand Design, *Newsweek*, Sept. 18, 1961.

more pulling the higher educational institutions of the country into the maze of centralized operation and, in some degree, control, or at least influence, over what they do educationally and scientifically. Procedural requirements are annoying and expensive, and institutions are short-changed on cost reimbursement.

On occasion there has had to be appeal to Congress from the prejudicial rulings of administrative divisions. Although significant control over method or content of either instruction or research in the colleges has not resulted, the price paid for freedom from such control is considerable, and equitable treatment often is difficult to procure, as is evidenced by the difficulties with the cost reimbursement problem.

Several states have established state scholarships for undergraduates, good in any institution of higher learning. Privately supported scholarships are steadily increasing. Institutional and private loan funds are in abundance and are increasing. There is reason to believe that these various sources will be adequate for needs of persons wanting to go to college.

On the capital side, the great pressure for expansion falls in the public institution area. Private institutions generally have expanded about as much as they are willing, and continue to receive substantial gifts. Quite a few states have been successful in floating state bond issues for this expansion. The necessity, or desirability, of a nationwide program of federal grants for higher education facilities is open to strong question.

Necessary Increase

Further major increase in financial resources of higher education in the next decade is clearly necessary. Enrollment will nearly double in this period, and the rate of increase will accelerate, from 60 per cent in the 1950 decade to nearly 80 per cent. A larger proportion of youth of college age will seek admission, and the demand for all services of higher education will grow.

But as in the case of schools, greater effort may well be given to probability of taking care of the needs of higher education more fully by state and private sources rather than by so much leaning toward federal assistance.

Higher education also could take a closer inward look at its own operations, in matters of admission policies, teaching loads, proliferation of courses, ever-expanding programs of research, more intensive use of space, administrative costs, filling of vacancies in institutions which are not operating at capacity, more lower level and vocational institutions and branches instead of unlimited expansion of already overloaded main centers. All these should aid in meeting the increased instructional load, and at lower additional cost.

It is interesting and reassuring, in the face of the great pressure for federal aid in which not a few leaders of higher education have joined with the more vocal school groups, to note the following comment by Deane W. Malott, president of Cornell University, in a report to the board of trustees and alumni, 1960-61:

"It is apparent that the financing of education, in general, is approaching some climactic decision making. The nation will soon have to decide whether it will support the essential private institutions through the medium of private, corporate and foundation giving or through further increases in the already substantial financial assistance they are now receiving through government. The needs will be identical regardless of how they are met. *It is my earnest hope that we shall choose the first alternative with its greater freedom and its adherence to our American tradition.*" [Italics added.]

The higher education proposals did not reach the stage of extended discussion in Congress. Strong opposition to them was not evident on the face of the situation. It cannot be assumed, however, that either the capita aid program or the undergraduate scholarship proposal was or would have been accepted without question. As things stood, Congress rebelled so firmly against the program as a whole that the only part of it given approval affecting higher education was a two-year extension of the N.D.E. Act, covering the student loan provision.

In Conclusion

The facts clearly indicate that no crisis exists in educational finance. Generally speaking, the schools are not in distress, and there is no emer-

gency calling for broad-scale, all-state, continuing federal aid. Needed funds for the next decade can be raised by states and local communities in all but perhaps a very few cases. These few could be dealt with individually on a temporary and one-year-at-a-time basis only.

In *higher education*, the federal government already is a considerable partner, but a minority one. The case for such a broad expansion at this level as was proposed is not proven or clear.

There have been suggestions that opportunity was not given to fully present the case for the aid program to Congress as a whole. But make no mistake, the members were well informed about it. It seems very evident that, in response to the expressed wishes of their constituents, congressmen did not want to fasten on the country a system of financial dependence on the federal government or to run the risk of the management responsibility being thus taken out of the hands of the states, communities and private agencies.

In spite of the highly negative response aroused in Congress by the great effort put forth, the Administration already has announced its intention to renew its recommendation for a broad general aid program in the session next month. Those who believe the action was well taken, as does the author, may have the battle to fight all over again. The arguments for it will be no different and therefore no more impressive, and the arguments against it will be on just as strong ground as before.

We in America want a good and complete system of education. We have continually indicated our willingness to pay for it, although its cost is still a small fraction of our total national income. We need to spend more for education. But the way to get the money is to dig down in our own pockets and make it available to educational agencies through state and local taxation and through gifts. We will have to do that in the end, and this is by far the best way to do it from the beginning.

Education is not and should not become a major responsibility of the federal government. It should be left where the Constitution of the United States left it — in the states and private agencies. ■

SOMETIMES a budget may be regarded as a financial strait jacket restricting the ability of staff members to carry out the missions assigned to them.

Budgeting is *really* a philosophy of communication, making possible the development and acceptance of a plan for operations within a stated period of time. It should include the determination of financial resources, and how they shall be used. Operation of a budget involves policy and procedure, analysis and, of course, control. While control is necessary to effective administration, it is not an end in itself. Control should be maintained only to make certain that each segment of the organization receives its allocated share of the resources available.

Without an effective yet flexible budget, with allocations of financial resources according to policy and procedures for control of operations, the objectives of any organization could not be realized, except with great difficulty.

In a multicampus university, such as the University of California, budgeting in its several phases is a year-round operation. It is a constant look into the future, with an eye upon operations in the past. For this reason the procedures and techniques that make for effective budgeting cannot be permitted to stagnate, lest the progress of the university and the morale of its staff be adversely affected. Modernization of policy, practices and procedures should be a way of life for effective financial administration. This is especially true in higher education today.

Major Simplification of Budget

Traditionally, many budgets for colleges and universities have been prepared on the basis of types, or objects, of expenditure. Upon receiving the call for budget proposals from the chief executive, departmental chairmen in consultation with their faculties engage in the necessary but hardly welcome task of determining how many additional faculty members to ask for, how much and whom to recommend for salary increases and promotions, how much will be needed in the new academic year for supplies, travel, telephone, printing, equipment and so forth. After review of the departmental proposals at sev-

The California Story, Part IV

How To Break a Budget Bottleneck

Loren M. Furtado

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eral levels of administration, this procedure culminates in a line-item budget.

In smaller institutions where departmental chairmen, deans and the chief executive are likely to have intimate knowledge of their operations, the system works reasonably well. Since there is firsthand knowledge of the institutions' needs, little other analysis seems necessary. The chief executive, however, might seek the advice of a budget committee of faculty members. Detailed budget requests from departments generally are received in the business office and summarized for review by the chief executive and then assembled in the business office for preparation of the budget document to be presented to the governing board for approval.

In general this procedure was followed for many years at the University of California. The tremendous growth of the postwar years brought expansion of the existing campuses and establishment of new liberal arts colleges at Davis, Riverside and Santa Barbara. This caused the system, which concentrated budgetary preparation and decisions in the central statewide administration, to develop bottlenecks affecting not only budget preparation but also over-all administrative operations. Under those procedures all budgetary decisions and modifications of the budget were made at the level of the chief executive and the regents' committee on finance.

This excessive burden upon the regents and the central administration

led to efforts to improve operating policies and budgetary procedures. These efforts resulted in the appointment by President Sproul, during the middle Fifties, of a committee on simplification of the budget, headed by Vice President H. R. Wellman. The committee studied many aspects of university budget procedure and made recommendations subsequently adopted by the president and the regents which materially altered the policies and procedures under which the budget is prepared and administered.

The revised procedures were directed toward marshalling the resources of the entire university to bear upon the task of preparing a coherent and comprehensive budget document and strengthening the concept of the executive budget at the university. Major changes effected by the committee were:

1. *Initiation of Tentative Allocations or Targets.* The "target" system called for chief campus officers to submit requests in writing, supported by work load justifications in advance of budget hearings held by the president. It was planned that tentative allocations could be set by the president after the hearings, and be based upon broad considerations of programs and estimates prepared by chief campus officers, and justified by them, rather than upon a myriad of details.

2. *Revised Presentation of Campus Budgets.* Departments were requested to classify changes to their budgets

Operating departments can now make all their needs and ideas known

into the following categories: (a) *Work load* — to include additional funds necessary to maintain the scope and quality of presently approved programs, and their extension, to meet increased work load such as increases in enrollment, maintenance costs due to occupancy of new buildings, administrative costs resulting from new legal requirements, tax laws, and so forth. (b) *Improvements* — such as sectioning of large classes, addition of new courses, expansion of existing research projects, and so forth. (c) *New programs* — to include new curricular, new research and service projects.

These modifications have increased academic planning emphasis on programs and their relationship to overall fiscal needs. They have provided a means by which operating departments could make known their needs and ideas for future expansion in terms of operating costs and priority ratings.

3. *Modification of the Budget.* Under the by-laws and standing orders of the regents of the University of California, all budgets and other appropriations must be approved by the committee on finance of the regents. Prior to the adoption of changes to the by-laws resulting from the budget simplification committee's work, all substantive budget transfers regardless of amount, all appointments to academic positions, all appropriations from emergency funds or provisions for contingencies required approval of the committee on finance. The revised standing orders delegated to the president authority to transfer funds within appropriations as designated in the budget and to appropriate within dollar limitations from provisions for contingencies, subject to subsequent reporting to the committee on finance.

Benefits Not Realized

The chief campus officers were then delegated authority to approve academic appointments at the non-tenure levels and to approve transfers from campus provisions for contingencies to meet departmental emergencies, such as needs arising from unanticipated enrollment. However, budgetary procedures were not revised to permit local processing of these approved appointments and transfer of funds, and the hoped-for

benefits from delegations of authority remained largely unrealized.

Academic appointments at the non-tenure grades, even though receiving nominal final approval at the campus level, remained subject to position control by line item maintained by the central statewide budget office. This held the campuses to a rigid position control and permitted little variation from the budgeted staffing pattern. Moreover, since there were few if any policies governing these matters, the position control function was performed both at the campus level and in the statewide budget office. Consequently delays in consummating appointments were a source of difficulty.

The calendar for setting of target allocations and the phases of detailed budget preparation gradually became compressed, with the result that the targets continued to be based upon detailed departmental requests. The calendar called for preparation of a line-item operating budget prior to ascertaining fall enrollment as a basis for enrollment estimates, and prior to consideration of the university's request by the governor or the legislature. This budget, presented to the regents in November, also constituted the university's request to the state. Its preparation commenced fully 18 months before it became operational. Consequently, as a result of modification by the regents, the governor, and the legislature, the document was largely out of date by the time it was placed on the books.

Brings Changes

Shortly after the inauguration of Clark Kerr as president of the university in 1958, the regents adopted a plan for administrative reorganization of the university, and accepted as a basic principle the decentralization of operating responsibilities to the campus level. This was the culmination of a comprehensive survey of administrative organization by the management consulting firm of Creasap, McCormick and Paget.

The regents and President Kerr believed that with the continued growth of the university and the addition of three new campuses by 1970, it was essential that operating authority and responsibility be established at the campus level under chief campus officers. This would permit statewide

The budget office can concentrate on improv- ing budget analysis

administration to concentrate upon policy development, analysis of operations, and all aspects of long-range planning.

Decentralization materially changed the role of the budget office with respect to the conduct of budget operations. As has been previously indicated, all appointments initiated on the several campuses were previously required to clear the position control exercised by the statewide budget office, whether or not final approval rested with the chief campus officer.

With respect to amendments to the operating budget, control was exercised even on routine transfers. Furthermore, little could be done to decentralize accounting and payroll operations to organization control of the chief campus officers until changes were made in methods of processing appointments, and in procedures for modifying the budget. Consequently, under decentralization, one of the first steps taken by the controller was the development of procedures to mechanize and simplify position control procedures and to advise the president that arrangements were complete for transfer of control responsibility to the chief campus officers.

Saves Seven Positions

The result was the immediate saving of seven positions in the budget office concerned with maintenance of manual position control. At that time, also, budget machine service operations were consolidated with those of the controller at a saving of at least two additional positions.

Under new policies only those operating proposals having policy implications need to be forwarded to the budget office for review. This permits the budget office to concentrate on improving analysis. In its new role the office has as its principal function the development of policies that apply to the operation of the budget, the development of expenditure guides, and the exercise of leadership in the improvement of budget compilation and analysis.

The budget office, under reorganization, is charged with developing policies applying to the budget process throughout the year. These revised policies permit decisions to be decentralized as far as practical, and to be made at a level where the judgments on them will be valid. More-

over, they are made by line administrators who are responsible for results achieved in their areas of operation.

New Approach to Budgeting

Late in 1959, President Kerr appointed a new committee on budget procedures chaired by Vice President-Finance R. W. Kettler. This committee was charged specifically with carrying out the recommendations of the management consultants, revision of the budget calendar, and revision of the budget documents, including the roster of personnel.

The members of the committee were concerned particularly that the effectiveness of the target allocation system was impaired by the existing schedule, which called for development of a line-item budget for presentation to the regents and the state in November. They also recognized the need for a different type of analysis of budget proposals at each administrative level. They recommended that line-item review be consummated at the campus level, and that the statewide budget office develop a program type budget that would facilitate review by campus and statewide officers.

Attention of the committee was devoted to the use of measures, unit cost comparisons, ratios and their applicability to the budget process, and the need for an eventual long-range planning approach to budgeting.

The committee recommended submission of a new type budget to the regents and the state in place of the detailed budget presented in former years. This would be a document summarizing budget proposals by major functional categories, i.e. funds required for instruction and departmental research, libraries, maintenance and operation of plant, and so forth. The budget was to be based to a maximum extent on programs developed on a unit cost basis. Increases were to be divided between work load and improvements and new programs. This would permit analysis of the budget in terms of enrollment trends, unit costs, and other factors affecting work load. Likewise new programs could be analyzed as to educational policy implications, fiscal implications, relationship to programs already authorized, and so forth.

The university's 1961-62 budget presentation to the state was prepared

There was a need for a different type analysis of all budget proposals

Control responsibility was finally transferred to the campus officers

rather than build up item by item on the traditional basis, the university can allocate funds to campuses and departments directly

in accordance with this plan. The request was supported by a statistical section showing unit costs of instruction at the lower division, upper division and graduate levels, per student credit hour, and by level of student and level of instruction. Other tables presented comparative statistics on libraries, medical centers, teaching productivity, unit costs of health services, and maintenance and operation of physical plant. The statistical section was designed to be of assistance to the legislative analyst and the department of finance in their evaluation of the university's budget request.

The revised calendar called for "target" or preliminary requests to be submitted by campuses to the president in April, following which the statewide budget office would analyze the requests (for increases) in terms of accepted work load measures and intercampus cost comparisons. Subsequent to analysis of campus requests, the president would schedule hearings with chief campus officers. These were to take place during May and June and were to be followed by tentative allocations of funds to each campus.

These allocations were to form the basis for building campus budget requests in summary form. At the campus level it was considered possible for the chief campus officers, in consultation with their deans, departmental chairmen, and the budget committee, to develop a work load budget request based upon enrollment, without asking departments to prepare detailed budgets by object of expenditure.

Another recommendation was to delay compilation of departmental allocations (the detailed operating budget) until after presentation of the governor's recommendations to the legislature and the initial legislative hearings on the university's request. By this date in early February, major changes made by the regents, the governor, or by the legislature could be reflected in the university's detailed budget, which now could be produced within three months of the beginning of the fiscal year to which it pertained. The president's authorization to chief campus officers to commit funds for new positions could now be given for teaching (work load) positions, upon receipt of in-

formation as to the extent of work load support included by the governor in his recommendations to the legislature.

As recommended by the management consultants, President Kerr transferred responsibility for the budget to the vice president-finance in early 1960. Since the 1961-62 budget cycle was about to get under way, work began in earnest to streamline budget operations and to institute a program of analysis in preparation for the 1961-62 program. Implementation of the recommendations of the committee on budget procedures commenced promptly upon the acceptance of the committee's report and the new calendar by the president and the regents.

In cooperation with the director of analytical studies, progress has been made in studying the factors affecting university costs. These studies, of student-staff ratios, faculty work load, and instructional costs are of direct application to the budget process and will be discussed in detail in a subsequent article. In addition, analyses have been made of supporting expenses required for the academic staff in departments of instructions and research. These studies have resulted in establishment of support levels by academic fields of discipline. It is now possible to allocate funds to campuses and departments without resorting to building up item by item on the traditional object classification basis.

Also during the year costs of university operations were compared with those of two other major universities. Detailed comparative studies were made of library operations and acquisitions with the hope of developing new work load measures to apply to budget and planning proposals for library development. These studies provided data useful in budgeting for the university's library development plan.

Department Allocations

With the reappraisal of the budget document concluded and reorganization of the unit accomplished, the new procedures were put into effect.

As soon as the president is advised as to the final decisions of the governor with respect to the university's request, he now allocates to each campus its academic positions and

operating funds for work load and requests chief campus officers to prepare departmental allocations. Instructions are prepared by the budget office. Production sheets listing the previous year's budget, department by department, are prepared by the machine service centers. These sheets are completed on each campus allocating funds and positions for each department.

Since levels of supporting expenses, i.e. nonacademic salaries, supplies and equipment needs for each major discipline (physical sciences, humanities, and so forth), have been previously established, and the budget levels determined at the target analysis stage, it is possible to allocate supporting funds equitably among the budgetary units. These allocations, entered on the sheets, are punched into cards and tabulated for each campus by machine services. The budget office verifies that each campus' allocations are in accordance with the presidential allocation and with budgetary instructions.

Personnel Listing

A decade ago the roster of academic and nonacademic staff was separated from the budget document. A roster was produced in the spring to incorporate staff changes, merit increases, and promotions effective the succeeding July. The roster was prepared independently from the establishment of payrolls. The administrative reorganization called for decentralizing payroll operations to the campuses, and the integration of personnel roster production with the payroll system. Effective with the 1960-61 personnel listing, the systems and procedures staff, working in co-operation with accounting, budget and machine services, produced a personnel listing as a by-product of the payroll system.

Operating Policies

Under highly centralized administration, much of the policy governing operations was never set forth in writing, and in the absence of specific policy many operating decisions were made by officers after consideration of facts presented in specific cases. In a decentralized organization, the need is apparent for policies to be spelled out for guidance of those to whom authority has been delegated.

The president has delegated to chief campus officers and vice presidents, within their areas of jurisdiction, authority to modify the budget to meet changes in operating conditions. Modifications can be approved by these officers when the justification is as adequate as for the approved budget, when adjustments can be made without detriment to the conduct of operations during the remainder of the fiscal year, and when no new programs or continuing commitments are involved.

In general, this authority extends to transfers within departmental budgets, and to transfers between departments when transfers are, for example, from academic salaries in one department to academic salaries in another.

Furthermore, chief campus officers and vice presidents are authorized to approve upward or downward revisions of income or recharges, and to approve transfers from provisions for contingencies within dollar limitations.

Other statements have been issued by the president setting forth policy on classification of positions upon resignation, death or retirement of incumbents, and upon authority to appoint and approve salary adjustments for academic and nonacademic staff members.

Perhaps the most important effect of decentralization of budget operations has been to permit operating decisions to be made by line officers at the scene of operations where facts are known, thus freeing the budget staff to concentrate on analysis of budgets and proposals for new programs. More time can now be given to improvement of budgetary procedures, analytical studies, and long range financial planning.

Data available on unit costs and on work load measures make it possible to evaluate in budgetary terms the progress campuses are making toward realizing the goals set forth in the university's 10 year academic plan. Costs for existing campuses and for newly authorized campuses can now be projected.

Adherence to a comprehensive academic and fiscal plan helps assure that available human and financial resources will be applied effectively in support of the University of California's educational program. ■

One of the most important effects is that operating decisions are now made at the scenes of operation where the facts are known.

Can a Minor Bind Himself

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A RECENT letter from a college business officer raised the question of the liability of a physician who treats or administers drugs to a college student who is a minor unless the physician has previously received the consent of the parents.

College administrators are so accustomed to dealing with young college students as individuals fully competent to make their own decisions that they should remind themselves that, in the eyes of the law, minors, even though they are enrolled in college, are still infants, incapable of handling their own affairs.

At common law an infant becomes of age on the day preceding the twenty-first anniversary of his birth, on the first moment of that day. This common law rule may be modified by the legislature and in some states the age of majority, as to females, at least for some purposes, has been fixed at 18 years. It is well established common law that female infants are deemed legally incompetent to give their consent to acts the consequences of which they are presumed not to fully understand.

A physician or surgeon must have the consent of his patient before he can administer drugs to him or operate upon him, unless the patient is unconscious or considered legally incompetent to make such a decision. Under such circumstances, the consent of the next of kin must be obtained, unless the patient's life would be endangered if emergency treatment were not given.

The general rule is that an infant cannot bind himself by contract, since he may, at his option, disaffirm them. However, an infant is liable

not for the contract price, but for the reasonable value of what the law has termed "necessaries." These include articles and services necessary for his support and comfort, such as food, clothing and lodging. The extent to which even such things are in fact necessary is a question to be governed by the economic and social status of the infant.

Medical and surgical services have been held to be necessities for which an infant may be held liable if it can be shown that his parents or guardian are unable or unwilling to provide them.¹ If this cannot be shown, there is considerable question of the legal capacity of a minor to enter into an agreement with a physician or surgeon for his services.

At common law, a schoolmaster stands *in loco parentis* to his students. He may control their conduct as though he were their parent so long as they are in his care. This rule of law is illustrated by a case involving Berea College.² The college authorities issued a regulation prohibiting the students from entering public eating houses in the community. The owners of a local restaurant, dependent on student patronage, sought an injunction to compel the college officials to rescind this regulation. The court refused the petition for an injunction and sustained the right of the college to control its students in the following words:

"For the purposes of this case, the school, its officers, and students are a legal entity, as much so as any family, and, like a father may direct

¹Westrate v. Schipper, 279 N.W. 870 (1908).

²Gott v. Berea College, 156 Ky. 376, 161 S.W. 204 (1913).

To Pay for His College Education?

How legally competent is he? Can he be held responsible for any of the contracts he signs?

his children, those in charge of boarding schools are well within their rights and powers when they direct their students what to eat and where they may get it; where they may go and what forms of amusement are forbidden."

It would seem that a college administrator has the legal capacity to authorize emergency medical or surgical treatment for students entrusted to his charge by their parents. He also has a duty to keep the parents informed as to their welfare, and this would imply that if it is reasonably possible to communicate with the parents with reference to the need for medical or surgical treatment, he should do so and permit them to direct the care of their offspring.

The importance of keeping parents informed as to the physical and mental problems of their children is illustrated by a recent case involving Stout State College.³ A student committed suicide and her parents brought suit against the director of student personnel service. In their bill of complaint they charged that he had been negligent in performing his duties and that "he had failed at all times to advise the said parents of Jeannie Bogust or contact them concerning the true mental and emotional state of their said daughter, thus preventing them from securing proper medical care for her...." The court declined to hold him responsible for her suicide, primarily on the grounds that he was "not a person qualified as a medical doctor or a specialist in mental disorders." Consequently, he could not be charged

"with the same degree of care based upon such knowledge as a person trained in medicine or psychiatry could exercise."

First Case Decided in 1844

Can a minor bind himself to pay for his college education? This depends upon whether the courts, in the state where the college is located, have ruled that a college education is a "necessary." Apparently, the first case to come before an American court involving this question was decided in 1844. A student enrolled in Middlebury College at the age of 15. The college accepted his enrollment without obtaining the approval or ratification of the parents. After the death of his father, the college attempted to collect tuition, room and board from the student himself. The supreme court of Vermont held that:⁴

"A good common school education, at least, is now fully recognized as one of the necessities for an infant.... But it is obvious that the more extensive attainments in literature and science must be viewed in a light somewhat different.... The mass of our citizens pass through life without them.... We therefore consider that such an education should not be ranked among those necessities, for which he could, as an infant, render himself... liable by contract."

In 1930, a Massachusetts court ruled that:⁵

"As a matter of law,.... a college education is not such a necessary to either defendant as to take the con-

tract out of the rule relating to infants." The case involved the rental of a suite of rooms in a privately owned dormitory used exclusively for students at Harvard University.

It is obvious that the common law in this area has not kept pace with modern educational concepts and procedures. In view of the many millions of dollars involved in the tuitions and other fees paid by minors each year to our American colleges and universities, this "cultural lag" presents potential hazards of some magnitude. Although minors may repudiate their contracts for goods and services other than those for necessities and demand the return of the amount paid therefor without returning the articles purchased, the vast majority of individuals are inherently honest and those that might be tempted to act otherwise usually are shrewd enough to realize that, to do so, would not be to their advantage.

However, in order to correct, to some degree, the failure of the common law to keep in step with public opinion in this area, the legislature of Illinois, in 1958, enacted a statute relating to student loans to minors:

"Section 1. Any student who has been accepted for admission to an institution in the state of Illinois approved by the State Superintendent of Public Instruction as an institution of higher education on either the graduate or undergraduate level shall be permitted to execute a legally binding promissory note for a loan necessary to attend or to continue in attendance at an institution of higher education, subject to approval by the institution attended."⁶

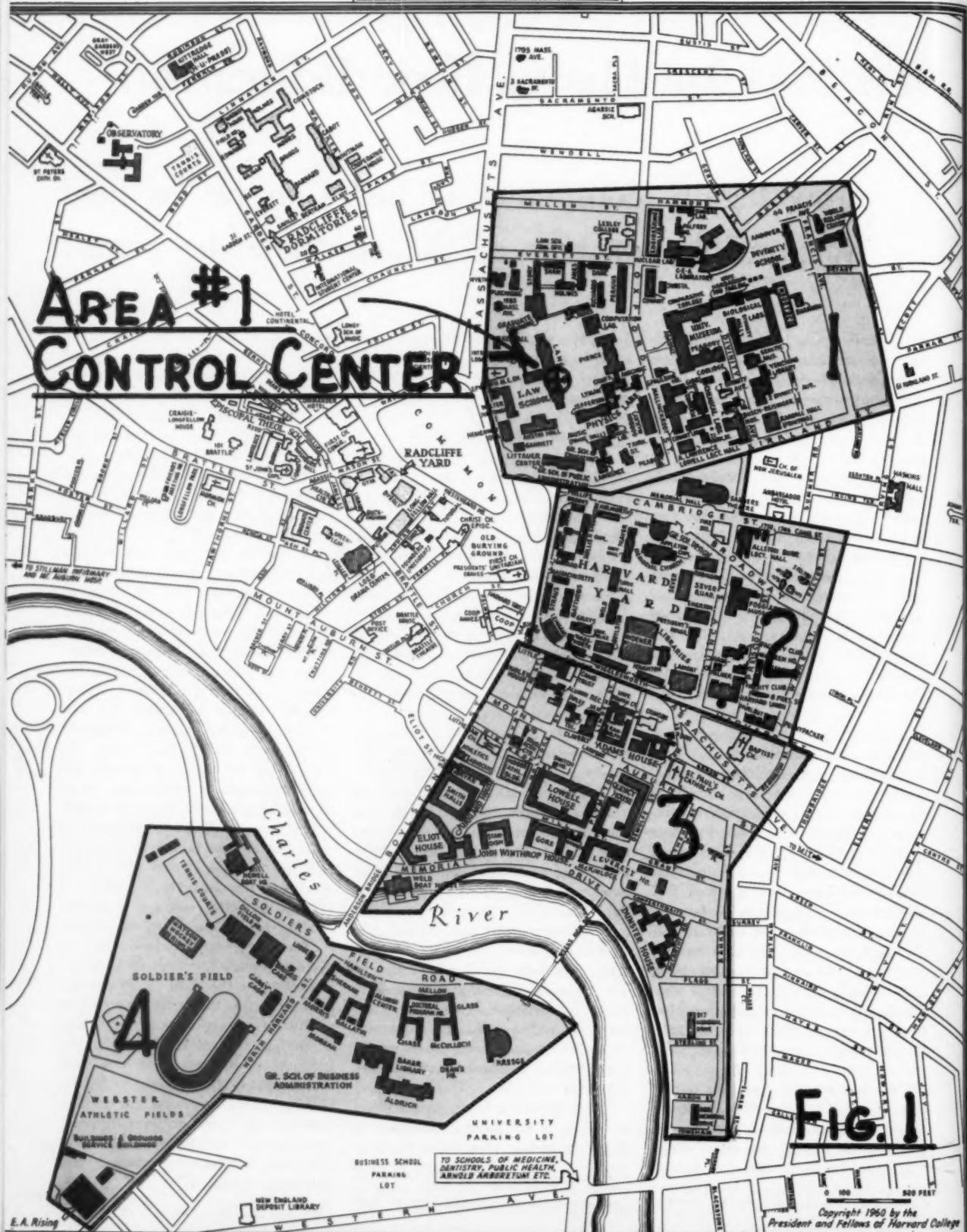
³Bogust v. Inverson, 102 N.W. 2d 228 (Wis. 1960).

⁴Middlebury College v. Chandler, 16 Vt. 683 (1844).

⁵Moskow v. Marshall, 271 Mass. 302, 171 N.E. 477 (1930).

⁶Ill. Rev. Stat. Chap. 29, Sec. 43 (1959).

HARVARD UNIVERSITY



THE day has passed when the occupants of a classroom or laboratory turn a radiator valve for more heat or raise a window for more ventilation. Modern heating, ventilating and air conditioning systems necessarily require more attention, more maintenance, and more frequent adjustment than old style systems if for no other reason than there happen to be more mechanical and electrical components involved.

In order to cope with the added work load created by the addition of more buildings, the installation of more complex systems in existing buildings, and the growing demand for year-round environmental control, better and more efficient use must be made of existing manpower, or work forces will tend to grow beyond manageable limits.

Problem of Control

A particularly knotty problem at Harvard has been the control and operation (by a relatively small crew of operating engineers) of more than 200 buildings spread over many acres. A map of a portion of Cambridge, Mass., indicating the relative location of Harvard's buildings is shown in Figure 1. Not shown are the medical school buildings located in neighboring Boston. Virtually all of the buildings shown on the map are served by a central distribution system and many are interconnected by underground walk-through tunnels. Steam for heating and other use is purchased from a local utility system as a by-product of their electrical generation. Around-the-clock service of these buildings by our operating engineers has been necessary because of the large number of residents, the evening use of classrooms for extension courses, and the multitude of off-hour functions. Furthermore, day or night, a close watch must be kept to make certain that all vital building equipment is functioning in a proper manner and that satisfactory conditions are being maintained in laboratories, classrooms, office spaces, and residential areas.

Past Practice

Two years ago an analysis of our then current practice revealed that an inordinate amount of time was consumed by our operating personnel in traveling from building to building

to check on operating conditions and to manually adjust a large number of heating, ventilating and air conditioning controls. Furthermore, to ensure adequate coverage, one man could be assigned the responsibility for only a limited number of buildings since malfunctions might otherwise go undetected for several hours.

On a typical winter day the men would start through the tunnels about 6 a.m., opening large steam valves by hand, turning on fans and ventilating systems, and checking temperatures and gauges. Some of these routes took two hours or more to complete. Periodically throughout the day the men would make their rounds to check valves, pipes, gauges, and to make adjustments. In the late afternoon, after classes were finished, the

ing men on foot through long tunnels to open and close valves and start and stop motors by hand was expensive in terms of both manpower and wasted heat and power. It was slow. Not only did it take two hours or more for a man to make his rounds, but it took a good deal of time for a man to respond to an emergency situation or a complaint. Manual control was not precise, and there was a health problem for men working in hot, humid tunnels, then emerging into the icy air of a Massachusetts winter.

The addition of new, complex buildings and the modernization of many of our older structures further increased the demands on the operating engineer's time. It was apparent that unless steps were taken to alle-

How To Manage Environment

From a Central Control Center

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men would again cover their long routes, turning off or turning down the heat in educational buildings not scheduled for evening use. Many times they didn't finish until long after the buildings were vacated. For buildings used infrequently or only for brief periods during the day (such as a chapel or assembly hall), a man would have to make a special trip either through the tunnels or outdoors to turn on heat to that building. Later he would make a second trip to close the valves. Generally, only during the very coldest weather is steam left on in all the buildings throughout the night. The summer season presented much the same picture with regard to cooling and ventilating systems.

Analysis

Such a control system was unsatisfactory for a number of reasons. Send-

viate the burden on the operating crew, it was going to be necessary to expand our work force or reduce the quality of the service rendered.

Solution

In an effort to obtain a better allocation of manpower and improved supervision it was decided to break the university down into several areas, each with its own central control point. Referring to Figure 1, you will note that the principal buildings of the university have been separated into four major areas with a fifth area (not shown) comprising the medical school. Each of these areas is reasonably homogeneous and contains a sufficient number of buildings to justify a control center.

Having determined the bounds of each area, we decided to start with the most complex grouping, desig-

nated as Area No. 1 at the upper end of the map. Area No. 1 consists of some 67 buildings, old and new, containing a variety of automatic and manual building control systems. It was determined that no improvement could possibly be made until we had minimized the number of manual operations by installing thermostats, time clocks, and other automatic controls and valves wherever possible. All buildings in the area were surveyed to determine the type of control then in use and recommendations and a budget were drawn up to make each building as automatic as was economically feasible.

With this accomplished we turned our attention to the reassignment of the operating engineers in this particular grouping. It was felt that with the elimination of most manual operations, an operating engineer could cover a larger group of buildings than he was able to previously and still check as he went through these buildings to determine that they were

functioning in a proper manner. Unfortunately, although we could stretch a man's tour of duty from two hours per round to four hours per round, we also introduced the possibility that a malfunction in any particular building might not be discovered for as long as four hours unless reported to our central office.

Obviously, therefore, while we could reduce the number of operating engineers required to check the buildings in this area, we could not render the same service as we had rendered heretofore, if and when operating difficulties arose. Furthermore, the automatic controls that had been introduced also introduced problems of their own, requiring a small amount of adjustment and attention from time to time. It became apparent that unless we had some means of detecting malfunctions quickly at some central point, our service was going to bog down.

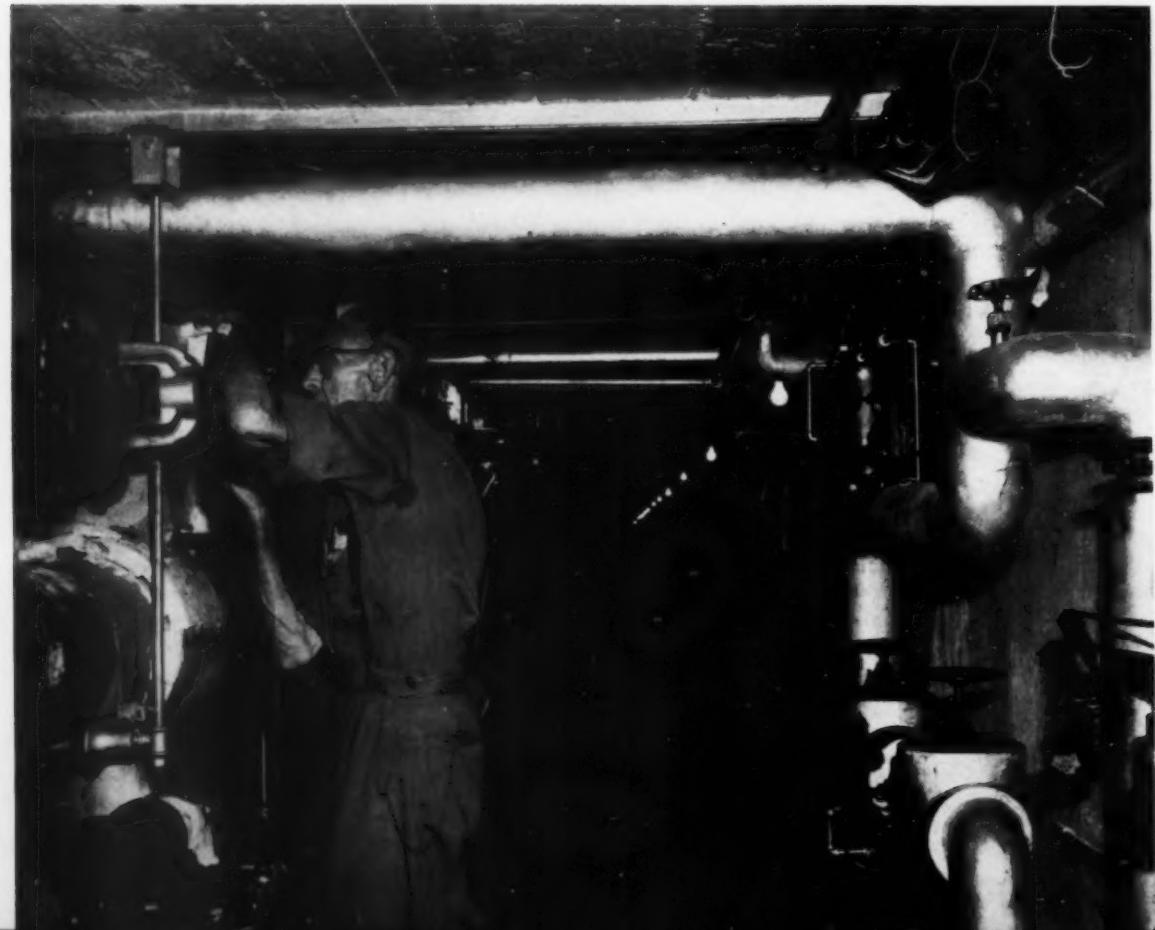
On consultation with various suppliers of control equipment we came

to the conclusion that a relatively simple system of sensing equipment failures at some central point would eliminate most of our operating difficulties. Additionally, if we could also operate certain controls and valves remotely from a central point we would eliminate the few remaining manual operations that we could not make entirely automatic.

The centralized sensing and control system finally installed consisted of a desk size console with a handful of push buttons and lights capable of checking all 67 buildings in Area No. 1 and controlling remotely a number of units that did not lend themselves to completely automatic local control. Fortunately, because of the trunk system of wiring which made multiple use of the same wires, it was not necessary to locate the control center in the geographic center of the complex of buildings.

The center was finally located at Langdell Hall on the west side of Area No. 1. The new control center

Before establishment of the central control center at Harvard University, it would take a man as long as two hours to go through the tunnels, opening large steam valves by hand, turning on fans and ventilating systems.





The new centralized sensing and control system consists of a desk size console with a handful of push buttons

and lights capable of checking all 67 buildings in Area No. 1. The key is a system of schematic drawings.

is shown in the illustration above. From this console located in Langdell Hall it is possible to:

1. View 39 schematic diagrams representing the various heating, air handling, and air conditioning systems in 67 buildings.

2. Start and stop 42 fans, some located a half mile away.

3. Operate remotely 32 valves to control steam flow.

4. Read temperatures from 100 points in the system.

5. Get immediate warning of humidity changes in the tunnels and in critical library areas.

Key to the miniaturization is a system of schematic drawings reproduced on 35mm slides. These slides are projected onto a translucent screen approximately the size of a small television set. By pushing a button the operator can bring whichever schematic he wants into view. Push buttons to operate remote motors, valves and temperature sensing devices are electrically linked to the projector.

When a given schematic is shown on the screen all push buttons are electrically reconnected to the components indicated on the diagram. When another schematic is projected onto the screen the unit automatically switches all control circuits to the new system. Consequently, only a single set of push buttons is required to control the fans and valves and temperature sensing devices for all 67 buildings. Space has been left in the unit for the addition of future buildings, for the further modernization of some of the older structures, for the installation of an intercom system, and for the addition of other supervisory or warning signals.

There is considerable merit in having a relatively compact unit rather than a multitude of dials, gauges and push buttons. Not only is the space requirement less but the operator's attention is focused on one system at a time and he is not distracted by a variety of controls confronting him. Furthermore, a minimum of training

is required to break in a new man on the central control panel.

Following the installation of automatic controls in each of the individual buildings in Area No. 1 and the tying in of these buildings with the central control panel, we found that we then had to streamline our work force to take full advantage of the new system.

One supervisor on a Monday-to-Friday day shift was given full responsibility for all operations in his area, including the second and third shifts. Working under his direction are two day-shift key operators, each of whom is in turn responsible for approximately one-half of the total group of buildings. The key operators and their operating engineers jointly perform the actual work of checking and operating all of the buildings in Area No. 1.

All complaints and requests are telephoned in to the central control room where one operating engineer is stationed to operate the control



A view of Harvard University from across the Charles River.

panel and receive calls. He also handles such paperwork as lubrication records, work schedules, and the maintenance log.

All operators call the central control panel regularly throughout their working day. Each individual operator has his route of buildings which he personally checks each day in addition to taking care of any complaints of malfunctions within his area. All the operators in any one area serve to back up the other operators in the event of a serious breakdown.

Evidences of malfunctions detected by the central control panel are transmitted to the operating engineer when he calls in and he also may be reached by means of an intercom system at certain locations. With this arrangement it is possible to fix definite supervisory responsibility for an area on a single person and at the same time give him the means of controlling the operations and personnel in the buildings under his care. It makes it possible for the individual operator to cover a very large group of buildings, making visual inspections and adjustments as he goes, knowing all the while that if a malfunction should occur in any of the buildings he will be notified quickly and can take immediate steps to correct the situation.

There is no need for an operator to rush through a building or a group of buildings merely to get on to the next building and he is able, because of this, to give each building much more careful attention.

The actual manpower requirements

in Area No. 1 were reduced sufficiently to amortize the investment in controls within two years without increasing the work load on any one individual. Operating engineers under this system make only minor repairs and adjustments and call upon other skilled buildings and grounds personnel for handling major repairs.

It was not considered desirable to eliminate the visual and personal check by the operating engineers of each of the buildings of the university at least twice during each operating shift, inasmuch as our control systems are not set up to detect unusual noises, loose belts, smoking motors, or other incipiently hazardous conditions.

Every investment should produce a tangible return for the sum invested and this is no less true of moneys invested in control systems. While many purveyors of control systems point with pride to better temperature regulation, more rapid sensing of operating difficulties, and other lesser refinements, these do not by themselves necessarily justify a large investment. We have taken the point of view that a measurable reduction in operating expense should be a prime consideration and that improved environmental conditions and problematical fuel savings should be taken as secondary and valuable by-products.

Exceptions to the foregoing will occur where laboratory or experimental areas are involved which require closer temperature and humidity con-

trol than that required for ordinary human occupancy. Equally important is the need to determine that investments of this sort are in harmony with the fundamental purposes of the institution and that funds are not being dissipated that might otherwise serve some higher purpose.

Labor and union difficulties also may arise as a result of the introduction of automatic controls and the re-assignment of work loads. Fortunately, we were confronted with two circumstances that favored the installation of an improved system — one, the growth of the university's facilities with a corresponding need for more manpower, and the other, the impending retirement of a number of our operating personnel. Close contact with our men, and a sincere and friendly explanation of what was being attempted and why, carried us through this period of transition without any noticeable difficulty. We feel that we have greatly increased the effectiveness of each of the operating engineers in this particular area and have made the engineer's job both more interesting and less onerous.

While all of our discussion up to this point has concerned itself with Area No. 1, the remaining areas of the university are being gradually converted to individual localized automatic controls in each building. Central control stations for each of the remaining areas have been tentatively selected, but the installation of centralized sensing and centralized control has been held off pending further refinements in such systems.

A primary modification in which we are very much interested is the elimination of, or sharp reduction in, the number of interconnecting wires required between each of the buildings and the central station. This problem is being worked on by several of the larger control companies, and development along these lines may soon be made public.

Analysis of the results obtained in Area No. 1 indicates an early write-off of our investment owing primarily to manpower reduction, with improved service to each of the buildings as a welcome by-product. Acceptance by the men of our revised methods of operation has been generally good and we look forward to extending similar improvements to the remainder of the university.

SKYSCRAPER RESIDENCE

**One of the tallest residence halls
on any campus, Long Island University's
newest structure cost \$2.6 million**

Melvin E. Kessler

S. J. Kessler & Sons, Architects & Engineers, New York City

ONE of the tallest campus residence buildings in the nation contains, under one roof, *all the elements* of a college community.

The new residence hall on Long Island University's 10 acre Zeckendorf campus in downtown Brooklyn has, in its various sections, residence accommodations for men, residence accommodations for women, apartments for married students and members of the faculty, dining facilities for all residents, and extensive recreational facilities.

A hub of general university activities, the 16 story structure was completed in the fall of 1959. Its cost was \$2.6 million, most of which was financed by a College Housing Loan from the Federal Housing and Home Finance Agency.

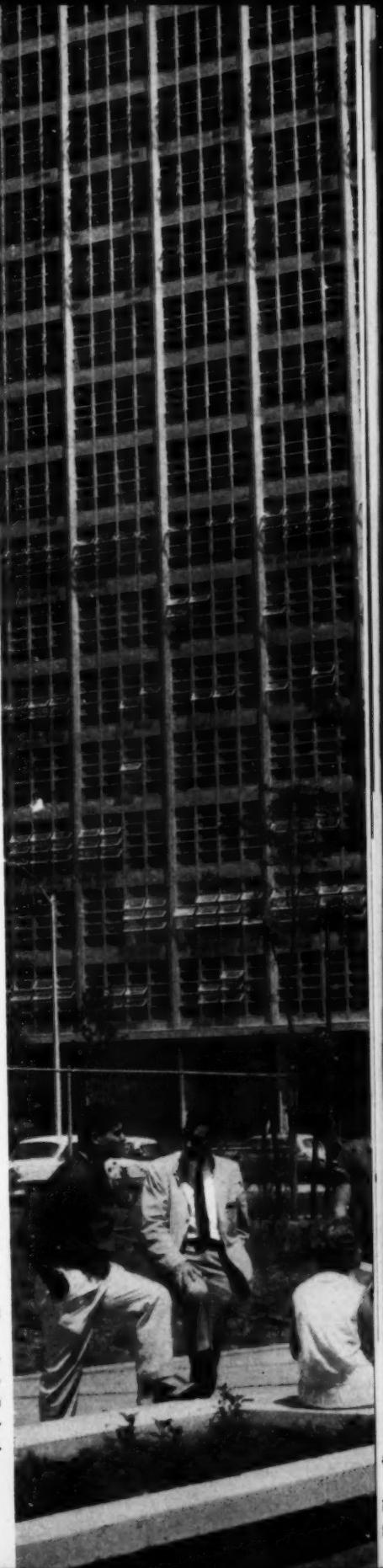
The building, located on a site of about 12,000 square feet, is 10 minutes by subway to Wall Street's Stock Exchange, 20 minutes to the United Nations, and 5 minutes to the Brooklyn Museum. Eight floors of the structure are devoted to residence hall rooms for single students. There are 20 such rooms on each of these floors, and an additional room for a floor counselor. The dormitory rooms measure 27 feet by 13 feet. Until this fall each of the 160 rooms was occupied by two students. This fall, however, university administrators assigned three students to some of the rooms to accommodate the increased enrollment and demand. At the pres-

ent time, 120 rooms have two residents, 40 have three residents. Each student is given a bed, a chiffonier-wardrobe, a desk, chair and study lamp. Each room also contains a lounging chair and window blinds.

Seven floors of the building are occupied by 91 efficiency and one-bedroom apartments for married students and faculty members. The efficiency apartments for married students have a living room that measures 14 feet by 20 feet, a separate kitchen, a bath and dressing room.

The main floor of the building has a student cafeteria seating 250, student and faculty lounges, additional dining facilities for 50 faculty members, and a lobby. The interior of the Jerome Taishoff Lounge was designed as a comfortable, homelike meeting place for residents by Barbara Skouras of Ellen L. McCluskey Associates, interior designers. Mrs. Skouras also designed the other public areas such as the cafeteria and lobby. In the lounge, residents may listen to stereophonic music, watch television, play chess, or study. The black vinyl floor is spatter-dashed in white, while the curtains are bright red, black, orange and yellow on a white background. Easily maintained vinyl covered chairs

A section of the new 16 story residence hall on the Zeckendorf campus of Long Island University in downtown Brooklyn. Building was financed by a College Housing Loan.



Right: Faculty lounge in Long Island University's new residence hall. The chairs are upholstered in plastic and heavy textured fabrics. Sheer window curtains are gray, black and white.



Above: The elevator lobby in L.I.U.'s new 16 story residence hall.

and love-seats pick up the curtain colors and white vinyl top tables are both attractive and practical from the point of view of easy upkeep. The sofas and large armchairs are covered in a durable tweed textured material. Placement of furniture allows the lounge to be broken up into various areas for smaller groups.

The cafeteria windows have the same gray, black and white casement curtains as the student activity room and the faculty lounge. Screens of red and white add a color note and may be used to divide the room into smaller areas. Tables have plastic tops with a walnut finish. The floor is terrazzo and the walls are off-white. Chair seats are red plastic.

University activities — including special conferences, guest lectures, and dances — contribute further to a friendly and stimulating atmosphere. ■

Right: Cafeteria, which seats 250, may be divided into smaller areas by screens. Walnut finish tables have plastic tops; the chair seats are red plastic.





Left: Zeckendorf campus residence hall provides living quarters for single students (both men and women), married students, and members of the faculty and administrative staff.



Right: Typical two-bed room in women's section. Each student is furnished a bed, chiffonier-wardrobe, desk, chair and study lamp. Each room has a lounge chair and window blinds.

They Built a Union for Medics

... that includes a seven-story garage where cars can drive off the roof, two residence halls, an athletic plant, and a view of San Francisco Bay and the Golden Gate Bridge that can never be impaired

Robert A. Alexander

Assistant Business Manager-Union Director

Guy S. Millberry Union, University of California Medical Center, San Francisco

LOCATED adjacent to San Francisco's majestic Twin Peaks and at the base of Mount Sutro, the University of California Medical Center is one of the seven campuses of the University of California. Enrolled are students in the schools of medicine, dentistry, pharmacy, nursing and the paramedical health sciences. Presently enrolled are some 1600 students served by a combined faculty and staff of some 5000 persons, reflecting the Medical Center's far-reaching research and extension programs.

The most recent addition to this spectacular institution has been the Guy S. Millberry Union, named after the late G. S. Millberry, renowned dental educator and former dean of the college of dentistry. In view of the complexity of contrasting facilities contained under a common roof, the mammoth structure was referred to as a "combined structure" during the planning and construction stages.

Major facilities include two residence halls (one for men and one for women), each housing 112 students, a parking garage accommodating approximately 900 vehicles, a fully complete "athletic plant," and typical facilities normally included in a student union. The women's residence hall is constructed to permit expanded accommodations for 292 occupants, and the men's includes luxurious facilities for distinguished campus visitors.

Situated between two of San Francisco's typically steep and breath-tak-

ing streets, the building's north side offers an incomparable and idyllic view of San Francisco Bay and the Golden Gate Bridge. Stepping onto the cafeteria terrace, one can see the seal rocks and ocean on the west, Marin County to the north, and Oakland-Berkeley to the east.

Like so many other student union projects, the Millberry Union was preceded by 35 years of planning and efforts. For a number of years, net profits from a book and supply store operated by the Associate Dental Students were earmarked for the union project. Dedicated individuals, recognizing the peculiar problems manifesting themselves in an academic health sciences situation, conducted an intensive subscription campaign among alumni and assisted in persuading the regents of the university to appropriate additional moneys.

A planning committee was named to work with the administration, staff, student body, and Architect Milton T. Pfluger. In addition, Porter Butts, director of the Wisconsin Union, was enlisted by the committee to aid in the development of a master program of facilities and activities.

The rapid growing Medical Center with all its ramifications necessitated a "stage-by-stage" development. At the present time all stages have been completed with the exception of the addition of five stories to the women's residence hall, involving a cost (not including land) of \$5.25 million.

The basic design concept of the over-all facility was essentially two-fold:

1. The tallest elements of the structure (the two residence halls) do not parallel Parnassus Avenue, the 15 story H. C. Moffitt Teaching Hospital, or the Medical Sciences Building. Rather, they are perpendicular to the avenue and these two buildings, thereby avoiding an "alley"; thus a sense of openness is felt along Parnassus Avenue. By placing these dormitories in perpendicular fashion, an open view for the hospital and sciences building was maintained.

2. The second design concept maintained independence in each of the several divisions of the combined structure, i.e. the women's residence facilities are private while having clear access to union facilities; public ingress and egress to the garage and other public facilities are also independent of areas reserved for the campus family.

Built-In Garage

It happens that the street which borders the structure on the east side is tied with one other for first place among the steepest streets in the city. The grade in question is in excess of 32 per cent, reflecting a difference in elevation of 85 feet from the upper main campus street to the lower street below. While this differential afforded planning advantages in certain phases, it also posed unique



Above: The main lounge features a mammoth two-way fireplace highlighted by identical oak tree mosaics on

either side. Below: Egress and ingress to the seven-story garage can be had from both the upper and lower stories.





Landscaped court at the entrance of the Guy S. Millberry Union and a connecting covered court create openness along the main street, while at the same time providing relief from the confinement of the multi-storied buildings on the main public thoroughfare running through the Medical Center.

planning problems and appreciably increased foundation costs.

Owing to the same site conditions, however, it became possible to include a seven-story garage structure that in no way interferes with the other facilities of the total building. Egress and ingress to the garage can be had from both the upper and lower stories, and the garage structure itself is entirely below the main floors of the other facilities. Delivery service to the building was mandatory from the upper main street in view of grade differential, but this was accomplished by means of a separate service concourse.

The main floor of the union, women's residence, and other main func-

tions are at the level of the upper grade street and their spectacular view to the north is above the garage roof. This view can never be impaired.

The facilities of the union are many and varied and include a large 60 by 90 foot all-purpose area. This particular section is primarily a gymnasium and is fully equipped as such. It can, however, also be used quite readily as an auditorium or as an area for catering banquets for as many as 600 people.

Other facilities of the union include a 20 yard heated swimming pool, two squash-handball courts, billiard area, a table tennis room, a faculty dining club, numerous lounge areas, a pub-

lic cafeteria (seating 125), a student cafeteria and fountain (seating 225), a music lounge, several meeting rooms, a book and supply store, a gift shop, student and administrative offices, and a three-chair barbershop.

Homelike Atmosphere

The institutional feeling has been avoided through the use of warm, happy materials and colors, in detailing for points of interest and intimacy rather than rigid mechanics and austerity. Woods of several species from a California ranch were donated and were used in finishing several areas of the union. As a result of private contributions the main lounge features a lovely and mammoth two-way fireplace highlighted by identical oak tree mosaics on either side. Doree Kerr, A.I.D., was retained as the interior decorator and collaborated with the architects in interior color design.

Structurally, the building utilizes a steel frame in the initial unit while the main parking structure is of reinforced concrete. Caisson foundations with belled bottoms of poured concrete were raised, despite both the steepness of the site and the sandy soil conditions. Foundation costs in the first unit alone were well in excess of \$200,000.

A landscaped court at the entrance of the building and a connecting covered court create openness along the main street while at the same time providing relief from the confinement of the multi-storied buildings on the main public thoroughfare running through the Medical Center. While the union's neighboring buildings are faced with ceramic veneer, cost considerations led to finishing the concrete exterior of the combined structure with colored cement plaster. A bold grid expressing columns and beams, with deeply revealed window walls of aluminum, tempered blue glass, and clear glass is the main theme of the exterior design.

The board of governors formulates policies of the union which are implemented by the union director and his staff. With one of the finest operating facilities in the West, the union has accomplished a great deal in providing programs to meet the highly specialized needs of those involved in the pursuit of the professional health sciences.

Thought for Food

The healthy philosophy of food service operation in a college

Loyal E. Horton

Director of Food Services, Associated Colleges of Illinois, Chicago

THE basic principle that university food service operates under is that of feeding the children of others adequate, nutritive, palatable food. The major obstacle is that food service is expected to feed them better than they have ever been fed before. This is a real challenge.

Food service directors are responsible to six groups of people: (1) the parents; (2) the students; (3) the faculty; (4) the administration; (5) the profession, and (6) themselves.

1. As parents help their children choose a college they are interested and anxious to know that the facilities for day-to-day living are adequate and comfortable. They want to know that their children will be well fed and cared for.

The reputation of the food service program is of utmost importance to the parents and should be. A fresh-

man has, in all probability, left his mother's apron strings forever. He probably will never return home on a permanent basis again. In many cases he will return only for short vacation periods. Therefore, for 35 weeks of the 52, the food director is responsible for his nutritional health.

2. The food service director's responsibility to the student is one of keeping him well satisfied. This is not an easy task. Often a student expects much more than what he is paying for. This can be offset by serving him the kind of foods he likes as often as possible, within the budget. Regardless of the kind of home a child is reared in, he has in most cases developed a liking for many inexpensive foods. Most students like spaghetti with a good meat sauce; sloppy jo sandwiches; hot dogs; hamburgers, and the like. The school can afford to serve these items; the secret is to serve them as often as good menu planning will permit.

(Continued on Following Page)

From a paper presented at the regional conference of the National Association of College and University Food Services, Northern Illinois University, DeKalb.

Students want to be served a neat plate from a counter that is neat and clean. They want the people serving to be pleasant and cheerful. They want the managers to be interested in them as students.

At one of our member schools a student told me the reason he picked that particular school was because his friends who had been there before him had been bragging about the good food served. I later found that this boy was the son of a Chicago bank president and could have gone to any school of his choosing.

3. The faculty provides the students with mental food, but to sustain life he must be provided with physical food. For the student to gain maximum mental stimulation, he must be an alert student. One who eats three regular meals will be alert. Since food service is directly related to the nutritional health of the student, and since his nutritional health is directly related to his academic alertness, food directors almost can be held responsible for the academic energies of the student. Their responsibility then to the faculty is one of providing three interesting, tasty, tempting meals a day, especially a breakfast that will encourage the maximum number of students to come and eat. Ask the faculty who the most alert students were in the afternoon classes. They are the ones who appeared at breakfast.

4. Food directors have a grave responsibility to the administration. It is a responsibility that demands their utmost attention, a responsibility of dollars and cents.

What fun food directors could have if there were no budgets. Since there are, they must do their best to meet them. The administration not only expects but demands this of them — it is a business operation that must be controlled. The basic control is the budget.

Because certain budget limitations must be met does not mean that interesting, tasty food cannot be served. The director must use his imagination and all of his energies to ensure good food at any level of money.

5. Each profession has certain standards and food service is no different. Such things as preparation techniques, level of sanitation, and quality of food are included in these standards. The food director is re-

sponsible for the maintenance of these standards.

6. College food operators have a responsibility to themselves. All persons have egos which like to be satisfied. Food service operators can satisfy these egos if they do their utmost to meet their responsibilities to others.

I have discussed the responsibilities of the food service operators to others and to themselves. But, of even more importance, is their value to the total university organization.

Food Director's Role

It is up to the food director to sell the real importance of food service in the total college picture. He must build his own status and develop his own prestige. He must sell himself and the importance of his operation to the students, the faculty, and the administration.

Food service is one of the most important functions on the total campus. It is the one animated area in which students visit three times a day.

Today, all colleges must grow to meet the demands of higher education in the years to come. And when a college begins to grow, there will be more students; more students mean more dormitory beds, and more dormitory beds mean more dormitory space. To provide this space, a system of paying for dormitory construction must be arranged for. Often, food service must carry its share of the burden. We must work toward this end.

Food service, housing and recreational facilities are keys to the growth of any college. Food service must be highly organized and efficiently managed to meet budget requirements in terms of debt service. The food service program must be of the best quality possible. We should be extremely interested in providing the best quality food at the lowest possible cost to the students. We should strive to serve not only nutritionally balanced menus, but individual food items that the students will like and enjoy. We must also provide the service as requested.

The type of service provided will vary with the school. If it is table service, then be certain that it is handled properly — the napkin folded correctly, the silver arranged in proper order, knife edges turned in, glasses and cups in proper place,

salads and bread and butter placed properly. Unless this is done, there is no real value in table service.

Student Discipline

Regardless of the type of service provided, the discipline problems in the dining room belong to the personnel staff. Dormitory head residents and counselors must carry the responsibility for all discipline problems. Once a food service person begins to control discipline, the food immediately doesn't taste as good as it did. Students resent it. My philosophy has been one of letting a student discipline problem be handled by someone else.

A discussion on food service philosophy would not be complete without some mention of the use of cycle menus. If cycle menus can be planned to take advantage of the seasonal foods and to show a complete lack of monotony, I could be in favor of their use. Perhaps the secret of cycle menus is the length of the cycle.

Another phase of our operation is that of nutrition education. We have a real opportunity to train young people in excellent food habits. The food habits which we develop will become in all probability lifetime food habits. We can, by example, teach the students to eat a well balanced meal. We can expose them to new food items. In this we must use care and caution. We cannot introduce too many new foods in a short period of time. A new food item introduced on an occasional basis is all that a student will tolerate.

But by careful planning we can during a school year introduce many items. I am a firm believer in teaching by exposure. Let an item appear often enough and the number eating it will automatically increase. We owe it to ourselves to make the extreme effort to help the student learn to eat common food items which may not have been part of his diet at home.

We can by serving good food be a major factor in maintaining high morale among our student body. A key to a successful university food operation is the level of morale during examination periods. If we plan menus loaded with favorite food items during examination periods, we do much for the morale of the student. A word of caution: Never introduce a new food item during these periods. ■

We Have an Idea Mill in the Business Office

New York University's business office set up a management consultant group that trims costs and improves operations

Grady E. Jensen

Former Business Manager, New York University, University Heights

AT A business office staff meeting early in 1959 the idea was raised of establishing some sort of an internal "management consulting" group within the business office. Functioning as a part of the broad program of improvement and modernization of New York University's business office policies and procedures, "Operation Scissors" quickly got under way with a committee of eight business office administrators representing the following areas of management: general administration, purchasing, personnel, systems and procedures, plant and properties, printing and publications, auxiliary enterprises, finance.

The Operation Scissors group functions first of all as an "idea mill." Any subject that appears potentially to have inherent savings and/or improved operations is discussed by the members. Those that are deemed worthy of further investigation are assigned to a member or two of the group for detailed study. Acting as a staff unit to, and having the blessing of, the university's vice president for business affairs, Operation Scissors informally but effectively has been able to benefit from the cooperation and assistance of business office division heads in charge of the areas in which projects fall.

Incidentally, in selecting members of the group, other than the chair-

man, care was taken not to include any senior major divisional administrators. The reason for this was two-fold: (1) Divisional directors all have more than enough to do in the course of their own jobs; (2) Operation Scissors members are looked upon as potential up-and-coming administrators to provide some depth in the business.

Projects that are researched to the point of formal recommendations are placed in report form for submission to the Business Officers Administrative Advisory Group (B.O.A.A.G.). This informal body consists of the business manager and assistant treasurer, controller, associate business manager-medical center, and associate business manager-University Heights Center. Projects deemed worthy of action are then transmitted to the divisional director for implementation.

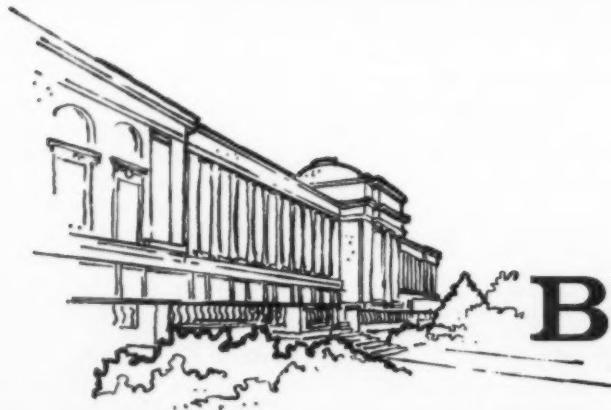
To date some 27 projects have been placed on the docket. Some of these have been formally presented as *firm recommendations*, such as: (1) decentralization of new employee physical examinations; (2) installation of an employee suggestion program; (3) consolidation in one book of the university's official (faculty-staff) directory and various Center telephone directories; (4) installation of an employee relations program; (5) installation of preemployment aptitude tests for clerical and accounting personnel; (6) improvement in the

over-all organization for control of printing and publication costs.

Some projects have been *closed out* after preliminary study as being untimely or unworkable. Examples are: (1) establishment of a university operated travel bureau; (2) installation of teletype equipment for inter-center accounting and data processing.

Still other projects are in the "*open file*," to be studied further before presentation topside or closed out: (1) leasing *versus* owning of university vehicles; (2) desirability of establishing an all-university office machine and typewriter repair crew; (3) desirability of repairing all air conditioning and refrigeration equipment internally *versus* use of outside repair agencies; (4) reduction in the large number of small-value items processed through accounting and data processing channels; (5) installation of a records destruction and retention program.

Frequently, business office heads become so involved with day-to-day operating problems that time for reflective thinking about their operations seems to disappear. The cross-pollination of ideas occurring in New York University's Operation Scissors seems to provide us with a built-in mechanism for reflective thinking for the entire business office. Certainly, every little bit helps! ■



BUILDING E

*Memorial Union Building, Oregon State University,
Corvallis, Oregon.
Owner: Oregon State University.
Architects: Church, Newberry, Roehr and Schuette,
Portland, Oregon.
Mechanical Engineers: The Office of Thomas E. Taylor,
Mechanical Engineers, Portland, Oregon.*



Modern architecture in the Commons wing adds a new dimension in beauty to the spacious Oregon State University Memorial Union. Thermal control is maintained in this wing by Herman Nel-

son year-round unit ventilators. These units served standard heating and ventilating functions when installed, but now have been converted to year-round air conditioning.

G EXPANSION...



Herman Nelson HerNel-Cool unit ventilators serve new wing of Oregon State Memorial Union

OREGON State University has recently expanded its beautiful Memorial Union building with the modern, new Commons wing. Forward-looking university officials planned the new wing to accommodate expected increases in enrollment, and their plans also allowed for the need for future air conditioning.

A Herman Nelson "now or later" air conditioning unit ventilator system met all the mechanical requirements for the new wing. And within less than one year, air conditioning was added.

HerNel-Cool Unit Ventilators require no unsightly ductwork and are styled for maximum compatibility with modern arch-

itecture. In building expansions, they often operate off original boiler room equipment. But most important, Herman Nelson Unit Ventilators are specifically designed to economically serve the special thermal needs of educational buildings.

HerNel-Cool Unit Ventilators are designed for year-round air conditioning. However, they can be installed now to provide heating, ventilation, and ventilation cooling only. Air conditioning can be added at any time in the future for about $\frac{1}{3}$ the cost of even the lowest cost air conditioning system. Investigate a low cost Herman Nelson system for your next new building, modernization, or expansion project.

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NEWS

Southern Cal Project Locates at South Pole . . . Soldier-Students Given
Special Help at University of Tennessee . . . Harvard Gives Funds for
Business History Research . . . Admissions Data Have Centralized Source

Two-Year Program for High School Students

UNIVERSITY PARK, Pa. — High school graduates are demonstrating a lively interest in two-year programs designed to prepare them for specialized assignments in business and industry.

Kenneth L. Holderman, coordinator of the Pennsylvania State University's statewide system of commonwealth campuses, says there are 1735 young men and women currently enrolled in Penn State's two-year curriculums and that a growing volume of inquiries clearly indicates an upsurge of interest in technological training.

"Interest in the associate degree programs," says Mr. Holderman, "is being generated by better utilization practices in industry, by better counseling in high schools, and by more and better educational programs throughout the country."

Mr. Holderman added that salary surveys over a period of five years would indicate that the monetary return is attractive to young people who may not have the financial means or the academic background to undertake a four-year program.

At the Altoona campus, for example, eight graduates of the electronics technology curriculums last year attracted salaries in excess of \$5000 a year. Several graduates from other campuses attracted salaries as high as \$6000. There are 13 branch campuses in the university's statewide system.

This training, which was pioneered by Penn State and which also is offered at University Park on a limited scale, embraces programs in agriculture, business administration, chemical technology, hotel and food service, and four areas of engineering.

"Most of Penn State's associate de-

Engineering Enrollments Drop for Third Straight Year

. . . despite over-all enrollments' steady rise

CHICAGO. — Total engineering enrollments in the nation's colleges and universities continued to decline for the third straight year, despite the fact that over-all enrollments are at a record high. President John T. Rettaliata reported these findings at the annual meeting of the trustees of Illinois Institute of Technology.

Speaking before the board, President Rettaliata warned that these decreases in engineering enrollments "constitute a serious setback in a field vital to our national security and growth." He cited the difference in total enrollments between 1960 and 1957 as amounting to 25,227 students, and remarked that this is "a severe loss for the field of engineering to bear."

In view of this jeopardy to our technological growth, Dr. Rettaliata urged this country's educators to "de-

vise methods and find means to induce a greater number of qualified students to enter the engineering field and see their courses through to completion."

While women students are an overlooked source of much needed professional talent in engineering, he pointed out, the percentage of women choosing this career field also showed a decline during these last three years.

The situation according to Dr. Rettaliata has stabilized, however. He said: "For the first time since 1958, there is no marked decline in freshmen engineering enrollments. In the fall of 1960, there was a 0.2 per cent decline from the previous year, as compared to 3.3 and 11.1 percentage losses, respectively, in each of the preceding two years. Furthermore, graduate engineering enrollments reached new peaks at all levels.

gree enrollment," explains Mr. Holderman, "is presently concentrated in the engineering technology programs. The graduate is a specialist in applied rather than theoretical engineering, and he's trained to translate creative ideas into new machines, products, structures and processes."

Central Source for Admissions Data

NEW YORK. — A centralized source of information on the college admissions picture has been established by the Student Admissions Center of New York City with the publication of its *REPORTS*.

The six successive issues, each of them freshly researched and edited, will function as a "running inventory" of freshman class vacancies at each of the listed schools. G. J. Hechtman, director of the Center, stated that plans for expansion call for listing at least 750 colleges before the end of the school year.

The current "Synoptic" issue is a summary of admissions requirements at approximately 513 colleges across the country. In addition to clearly indicating comparative pressure for admission at each of the listed colleges, *REPORTS* carries such intelligence as: the closing date for application.



OFFICE SPAN

Executive Conference Desk with Modular Credenza and Fully Upholstered Executive Chair.

Simmons Exciting New furniture for offices



Office Span designed by John Van Koert, A.I.D.

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NEWS . . .

the availability of freshman class "profiles," quotas for out-of-state students, and other pertinent information.

Available on a subscription basis to guidance counselors and heads of established public and private schools, the issues are the only up-to-the-minute listing available. The *REPORTS* are particularly valuable in those situations where a student has been rejected by the college of his first choice.

Southern Cal Begins South Pole Project

LOS ANGELES. — The first phase of the U.S. Antarctic Research Program, which may require a decade and ultimately become the largest and most complex scientific expedition ever made into the south polar regions, will begin early in 1962.

Long interested in the marine biology of the north polar waters, the University of Southern California

soon will begin a long-term research project in the Antarctic seas. Supported by the National Science Foundation, a team of U.S.C. scientists and graduate students will board the USNS *Eltanin* and begin an expedition that will include initial assignment to U.S.C. of investigation of deep sea fish, animals of the deep sea basins and trenches, photography of the bottom of the south polar seas, the study of marine mammals including whales, porpoises and seals, intensive study of plankton and research in depth into biological productivity in the frigid, inhospitable waters.

Purdue Reasserts Scientific Leadership

LAFAYETTE, IND. — A move to reassert scientific leadership of the Midwest was launched recently with announcement of establishment of the Purdue Industrial Research Park here, and the signing of its first tenant.

The Purdue Research Foundation will develop the first six acres of the tract, located about a mile and a half from the campus, on a build-and-lease arrangement.

Quotes of the Month

General Dwight D. Eisenhower emphasizing the growing need for higher education, particularly in the fields of science and engineering, before 1000 leaders in industry, education and the professions gathered at Case Institute of Technology:

"In primary and secondary education, despite all our self-criticism, we lead the world. . . . Beyond the high school, however, the situation changes. For one thing, higher education for every American who wants and merits it and can use it for the good of our country and humanity is still beyond the financial capacity of thousands of our young every year. Increased expenditures of tax money are not the sole answer to the financing of expanded higher education. Where citizens are alert and vigilant, money so raised at the community and state levels is efficiently and effectively spent. But in the vast federal administrative network, both efficiency and effectiveness are reduced

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NEWS . . .

by the inescapable companions of bigness that range from red tape to political log rolling."

Sidney G. Tickton, college financing expert, criticizing colleges and universities for failing to conduct themselves as businesses, in a recent publication of the Ford Foundation:

"They incur big deficits and depend upon charitable contributions to cover the operating losses."

Harvard Will Aid Archivists, Researchers

CAMBRIDGE, MASS. — The Harvard Graduate School of Business Administration recently announced the availability of funds to aid archivists, librarians and researchers interested in investigating topics in economic and business history or in studying the acquisition and handling of archival material, manuscripts and books in this field. The school's unique resources in these areas will be available to such persons during the summer of 1962.

Members of the business history group and the staff of Baker Library will be available for consultation and guidance, but applicants who receive assistance will be free to pursue their projects as they think best. The criterion for awarding financial aid will be primarily the extent to which the use of the school's resources can be expected to advance proposed projects. This decision will be made by a committee of faculty members at the Harvard Business School. The amount of aid will be adjusted to the requirements of the individuals who are selected.

Inquiries may be addressed to Prof. Ralph W. Hidy, Morgan 304, Harvard Graduate School of Business Administration, Soldiers Field, Boston 63.

High School Teachers Receive I.I.T. Training

CHICAGO. — Fifteen high school mathematics teachers will receive advanced full-time training at Illinois Institute of Technology through the award of a \$103,800 National Science Foundation grant.

Rounding off an entire fellowship program in mathematics, the new N.S.F. grant enables 15 teachers to study full time at I.I.T. The National Science Foundation has granted I.I.T.



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NEWS . . .

funds for in-service fellowships, which allow local teachers part-time opportunities for advanced study. In addition, Esso mathematics fellowships provide stipends for part-time study to teachers who prefer to continue work and study on a part-time basis.

Under the Academic Year Institute, as the program is called, \$3000 will be granted to each qualified mathematics teacher for tuition and subsistence. An additional stipend of \$450 will be made available for each de-

pendent. Teachers may take a leave of absence from their schools in order to devote full time toward their studies.

Undergraduate Aid Increases 50 per Cent

HOBOKEN, N.J. — Undergraduate student aid for the 1961-62 academic year at Stevens Institute of Technology totals \$424,800, a record amount in the college's history and a 50 per

cent increase over last year. Charles R. Wellhausen, dean of students and admissions announced the figures in his annual scholarship report.

This year 475 students, 44 per cent of the 1066 undergraduate body, received some form of financial assistance. The average grant was \$894; the maximum was \$2400.

"Like anything of quality a Stevens education is expensive," Dean Wellhausen said. "But these figures show that financial need does not prevent high caliber students from attending Stevens, thanks to the increased help of industry, civic and other groups."



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Development Study Available in Reprints

In response to the unusually heavy demand for copies of Administrative Study No. 7 on Development, published in the November 1961 issue of COLLEGE AND UNIVERSITY BUSINESS, the editors will make available this special section in reprint form at the following prices: 1 to 10 copies, 75¢ each; more than 10 copies, 60¢ each.

Recalled Students Offered Special Help

KNOXVILLE, TENN. — Students who are called to active duty with reserve or national guard units of the armed forces are being given special help and consideration at the University of Tennessee. The students will be allowed to withdraw without any credit for the work done and be refunded full maintenance fees, or they may take an examination and qualify for one-half of a quarter's credit.

"We want to be just as good to these boys as possible," said Truman Pouncey, dean of admissions, in announcing the policy. The policy will apply to the 49 students who have already withdrawn from the university as well as those who may be activated in the future. It is the same program effected during World War II.

If withdrawal is required at the two-thirds point of the quarter, the student may apply for full credit in the course by taking an examination with or without extra instruction from his teacher. Students affected by call-up must notify their instructors in advance if they want to get credit for

part of a quarter's work. The students can then complete their work at the university when they are released from service. The requirements to complete their class work if students have received half-quarter credits are worked out individually with advisers.

NAMES IN THE NEWS



S. Korninger Prof. Siegfried Korninger was appointed the new academic director of the University of Vienna (Austria) study programs conducted for American college undergraduates by the Institute of European Studies, Chicago-headquartered nonprofit organization specializing in the overseas study field.

Robert P. Walker is the new director of the in-plant training program at the Robert Morris School, Pittsburgh. He was formerly associated with International Business Machines for 11 years.

Dr. Leslie W. Ross has assumed duties as assistant to the executive secretary of the New Mexico Board of Educational Finance, Santa Fe. The Board coordinates and advises on certain fiscal matters for seven public higher institutions and three special schools in New Mexico. Dr. Ross was registrar of San Jose State College, San Jose, from 1953 to 1958.

Charles T. W. Curle, a specialist in the field of international education and the problems of underdeveloped countries, is a visiting professor of education at Harvard University. He has been a consultant to the Ford Foundation-Harvard Pakistan Project in Economic Planning and, more recently, was head of the department of education at the University College of Ghana.

Alfred L. Heller, former director of housing at Upsala College, East Orange, N.J., is now business manager of residence halls, University of California Medical Center, San Francisco.

Dr. Henry L. Jacobs, president of Bryant College, Providence, R.I., for 53 years, was named president emeritus at a recent meeting of the board of trustees. His son, **Dr. E. Gardner Jacobs**, acting president and former vice president, was elected president

unanimously. **R. Lucian Appleby**, formerly secretary and assistant treasurer of the college, was appointed secretary and treasurer. The Hon. **Raymond H. Hawksley**, treasurer of the state of Rhode Island and past president of the Bryant National Alumni Council, was named a member of the board of trustees.

Dr. George Barnes, physics professor and director of the vacuum physics laboratory at the University of Nevada, Reno, has been named associate director of the Desert Research Institute for the physical sciences.

Robert L. Cone has been named by the trustees of Loma Linda University, Los Angeles, to serve as the university's vice president for financial affairs. The new vice president was secretary-treasurer of the Southeastern California Conference of Seventh-Day Adventists prior to his acceptance of the university post.

Dr. Vernon Alden, assistant dean of Harvard Business School, has been named president of Ohio University, Athens. He succeeds **John C. Baker**.

Logan Wilson, president of the American Council on Education, re-



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of paper and ink and glue — you
sell him a whole new way of life."*

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MANUAL SLICER—Model 1012—
has all the new, fine features of
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Tubular feed chute for versatile slicing Slices largest cuts of meat or cheese

**BETTER BUY SLICERS...
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cently announced the appointment of Homer D. Babbidge Jr., assistant commissioner and director, Division of Higher Education, U.S. Office of Education, to the newly created position of vice president of the Council. Designated one of the "ten outstanding young men of the nation" by the U.S. Junior Chamber of Commerce in 1959, Dr. Babbidge has held the assistant commissioner post for two years.

William A. Brickel, instructor in biological sciences at Keystone Junior College, La Plume, Pa., has been named administrative assistant to Dr. Harry K. Miller Jr., president. He succeeds Russell E. Clark, who retired. It was also announced that George E. Clark, regional news editor of the Scranton, Pa., Times, has assumed the position of director of development and public relations. Mr. Clark succeeds Florence Kellow in the public relations post. The development position has been newly created.



Dr. Ian R. MacGregor was recently appointed acting financial vice president of the University of Akron, Akron, Ohio, and acting secretary of the board of directors. Dr. MacGregor succeeds Leslie P. Hardy, who assumed his new position as executive director of Citizens for Progress on December 1.

Richard E. Wood has been named director of admissions at Colorado College, Colorado Springs.

Carroll Rikert, business manager of Middlebury College, Middlebury, Vt., has been appointed assistant treasurer, a position he will assume in addition to that of business manager.

Eldredge M. Hiller, former vice president of the Council for Financial Aid to Education, has been named to succeed David M. Church as executive director of the American Association of Fund-Raising Counsel, Inc. Mr. Hiller will formally succeed Mr. Church on January 1.



Ralph C. M. Flynt, assistant commissioner for legislative and program

development in the Office of Education, U.S. Department of Health, Education and Welfare, has been appointed assistant commissioner for statistics and research services. He succeeds Dr. Roy M. Hall, who is now at the University of Texas.

Dr. Arthur S. Adams, who retired in June as president of the American Council on Education, has accepted an appointment as a professor of higher education at the University of Colorado, Boulder, effective February 1. Dr. Adams, a graduate of the U.S. Naval Academy, was the administrator of the Navy V-12 Program during World War II.



Arthur S. Adams

Charles I. Schottland, dean of Brandeis University's Florence Heller Graduate School for Advanced Studies in Social Welfare, Waltham, Mass., has been named to the concurrent post of dean of faculty at the university. He succeeds Dr. Lawrence Fuchs, who was recently granted a leave of absence to direct the Peace Corps program in the Philippines.

Dale Purcell, former general secretary of Earlham College, Earlham, Ind., has been appointed to the position of director of development at the University of South Florida, Tampa.

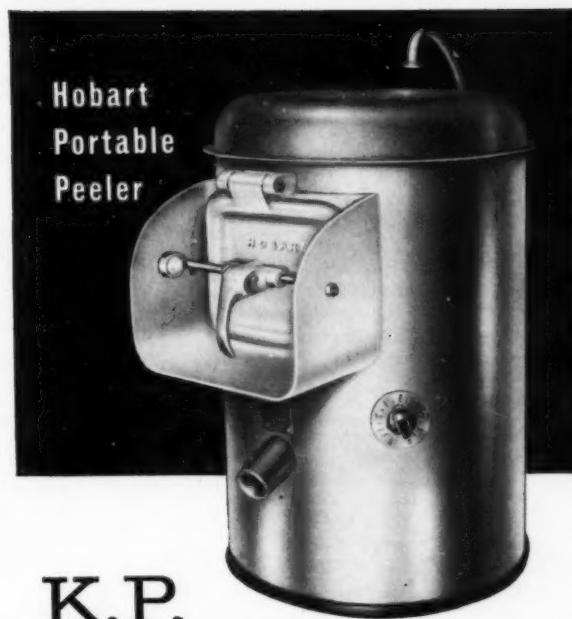
Dr. John J. Pruis has been named assistant to the president at Western Michigan University, Kalamazoo.

Robert W. Hathaway, a member of the faculty and administrative staff of the Rhode Island School of Design, was named student activities director of Bryant College, Providence, R.I. In another appointment, **Kenneth W. Cedergren** was appointed director of alumni affairs.

Dr. Cornelis W. de Kiewiet, who recently resigned as president of the University of Rochester, has joined the staff of the American Council on Education as a consultant.

Dr. Milton Hassel, former academic dean of Mankato State College, Mankato, Minn., is now president of Nebraska State Teachers College at Kearney. Succeeding Dr. Hassel at Mankato State is Dr. Bevington Reed.

The Rev. Dr. Edmund Davison Soper, president of Ohio Wesleyan University from 1928 to 1938, died recently. He was 85 years old.



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Uniform Peeling...No "Flats"—Every shape and size potato thin-peeled by specially shaped Hobart abrasive disc working with self-cleaning, ribbed hopper sides (synthetic rubber).

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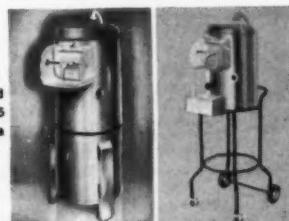
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National Association of College Stores

President: John Galbraith, University of Miami Bookstore, Coral Gables, Fla.; general manager: Russell Reynolds, 55 East College Street, Oberlin, Ohio.

Convention: April 23-27, Hotel New Yorker, New York.

Association of College and University Housing Officers

President: Newell J. Smith, University of Wisconsin; secretary-treasurer: A. Thornton Edwards, Kansas State University.

National Association of Educational Buyers

President: Elmer Jagow, Knox College; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 5-7, Washington, D.C.

Association of College Unions

President: Floyd I. Brewer, University of Cincinnati; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention 1962: Purdue University, West Lafayette, Ind.

National Federation of College and University Business Officers Associations

President: Wilbur K. Pierpont, vice president, University of Michigan; secretary: C. E. Prothro Jr., Tuskegee Institute.

National Association of Physical Plant Administrators of Universities and Colleges

President: Richard Adams, Oregon State University; secretary-treasurer: John H. Sweitzer, Earlham College, Richmond, Ind.

American Alumni Council

President: Waldo Johnston, Yale University; executive director: Ernest T. Stewart, 1707 N Street, N.W., Washington 6, D.C.

Convention: June 24-28, Banff Springs Hotel, Banff, Alta.

College and University Personnel Association

President: Fred C. Ford, University of Pennsylvania; executive secretary: Donald E. Dickason, 5605 Avenida del Mare, Sarasota, Fla.

Convention: Aug. 5-8, 1962, University of Kansas, Lawrence.

Canadian Association of University Business Officers

President: G. L. Court, University of Toronto; secretary-treasurer: D. S. Claringbold, treasurer, Hart House, University of Toronto.

American College Public Relations Association

President: Lyle M. Nelson, Stanford University; executive director: Frank L. Ashmore, 1785 Massachusetts Ave., Washington 6, D.C.

Associations of College and University Business Officers

American Association

President: I. T. Creswell, controller, Fisk University, Nashville, Tenn.; secretary: C. E. Prothro Jr., Tuskegee Institute.

Convention: May 3-5, 1962, Fisk University.

Central Association

President: Ralph Olmstead, Evansville College, Evansville, Ind.; secretary-treasurer, James J. Ritterskamp Jr., Illinois Institute of Technology, Chicago.

Convention: June 13-15, Kellogg Center, Michigan State University, East Lansing.

Eastern Association

President: Richard D. Strathmeyer, Carnegie Institute of Technology, Pittsburgh; secretary-treasurer: Kurt M. Hertzfeld, Boston University.

Convention: Dec. 3-5, The Warwick, Philadelphia.

Southern Association

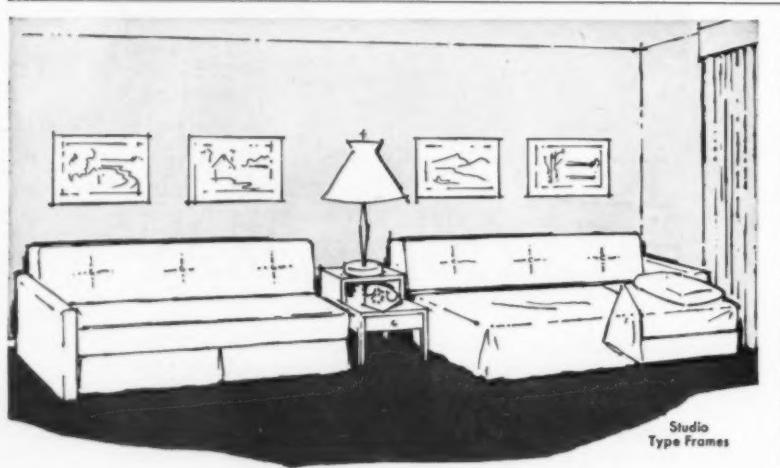
President: Trent Root, Southern Methodist University; secretary: Clarence Scheps, Tulane University.

Western Association

President: Robert B. Gilmore, California Institute of Technology; secretary: H. S. Thomson, University of California, Santa Barbara.

Convention: April 29-May 2, 1962, Mark Thomas Inn, Monterey, Calif.

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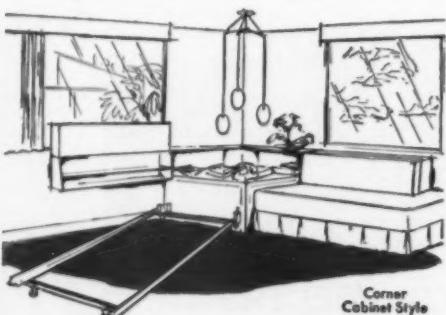
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Controller — Mature financial-management executive presently in high-level Federal government position; diversified public accounting experience including universities and local governments. Write to Box CW 655, COLLEGE AND UNIVERSITY BUSINESS.

Director, Food Services — Presently employed; graduate in food administration; college experience; ability to render an outstanding service; excellent references; relocate. Write to Box CW 649, COLLEGE AND UNIVERSITY BUSINESS.

Director of Food Service — Administrator — Male, age 36, 15 years experience including mass commercial work — personnel, purchasing, organization, dietetic control; presently director of food service in one of east coast's larger institutions; available after June, 1962 for permanent position. Write to Box CW 652, COLLEGE AND UNIVERSITY BUSINESS.

Director, University Press or Services — Age 47; ten years experience in fund raising, public relations, bookstore management, post-office, and auxiliary services; familiar with budget preparation, trustee reports and comptrollership. Write to Box CW 618, COLLEGE AND UNIVERSITY BUSINESS.

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Business Manager — Excellent opportunity for qualified man, starting July 1962; large eastern boys' boarding college, preparatory school; application held confidential. Reply, giving full information, salary desired, etc., to Box CO 428, COLLEGE AND UNIVERSITY BUSINESS.

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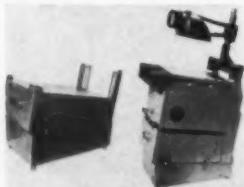
WHAT'S NEW

Edited by Bessie Covert

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Designed for use with the Beseler Vu-Graph Overhead Projector Models 7750 and 6600, the versatile new Tilt Table is raised or lowered to attain the desired



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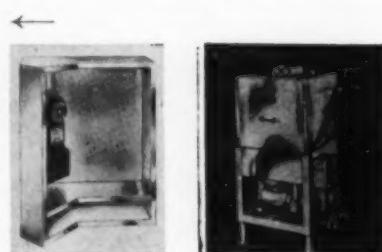
Incorporating the important characteristics of Herman Nelson Classroom Unit Ventilators, the Audivent is designed in sizes to suit the needs of auditoriums, gymnasiums, cafeterias, swimming pools and other large areas. It is available for steam, hot water or electric applications, and can be simply converted to either immediate or future year around air conditioning. Ultra quiet operation is achieved



by engineering and the addition of a sound attenuator in each unit, which is lined with one-inch thick glass fiber insulation. The enclosed motor and drive within the cabinet are accessible for servicing through hinged access doors. The Audivent is available in nine sizes in the low pressure range and seven sizes in the high pressure range. American Air Filter Co., Inc., Louisville 8, Ky. For more details circle #376 on mailing card.

Dual-Purpose Bed-Divan Uses Standard Box Spring

Using a standard 54-inch box spring and mattress, the new Harvard 4/6 Tracked Divan converts from a comfortable divan with proper seating pitch and depth, to a full size 4/6 bed, moving easily in and out on a riser track. There is room to walk between the bed and the floor-standing cabinet for bed making and cleaning when in the full out position, and the bedding is recessed under a cushioned bolster cabinet. It is adaptable for both dormitory and faculty housing. The Harvard Mfg. Co., 7619 Grand Ave., Cleveland 4, Ohio. For more details circle #377 on mailing card.



Foldoor Gym-Wall Partition Is Power Operated

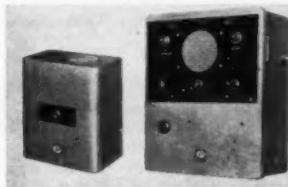
Power operation, rugged construction and moderate cost are features of the new Foldoor Gym-Wall Partition for closing off portions of a gymnasium or balcony, or opening the whole area for maximum seating. Flexibility is combined with ease of use as the partitions travel on a curved track to a convenient stacking position against each end wall without the need of switches. The vinyl fabric covered accordion units have two interliners of steel



clad building board panels which withstand rough usage during indoor athletics and reduce sound transmission. Holcomb & Hoke Mfg. Co., Dept. 742, 1545 Van Buren St., Indianapolis 7, Ind. For more details circle #378 on mailing card.

Audio Alarm System for Periods of Non-Occupancy

Completely self-supervising, the new Powers-Mosler Audio Alarm System provides tamperproof security for institutional buildings during periods of non-occupan-

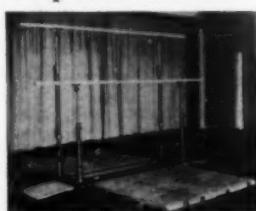


cy, and includes signal units with microphones which are ultra sensitive to sound and vibration to detect unauthorized entry through doors, windows, walls or ceilings. Without any indication to alert the intruder, an alarm is instantly relayed to a monitor unit which can be located as far as five miles away. Powers Regulator Co., 3400 Oakton St., Skokie, Ill. For more details circle #379 on mailing card.

Major Design Changes in Hobart Model AM Dishwashers

Major changes in design are built into the new Hobart Model AM Series door-type dishwashers. Doors are precisely spring counter-balanced with pivot points for easy fingertip operation, and shock absorbers cushion door action. Chains, pulleys and door weights are eliminated, inside and out, and all controls are centralized within an 18-inch Time-Saver Triangle for ease and speed of operation. The new series includes the basic two-door Model AM-8 dishwasher, the Model AM-9 illustrated, with an inspection door, and the Model AM-9C for corner installation. The Hobart Mfg. Co., Troy, Ohio. For more details circle #380 on mailing card.

Olympian Gym Apparatus Line Meets Competition Standards



Designed to meet the rigid requirements for international competition, the new Olympian Line of competitive gymnasium apparatus includes "System Reuther" men's and women's parallel bar, horse, high balance beam, horizontal bar and Reuther Board. Porter Athletic Equipment Co., 9555 Irving Park Rd., Schiller Park, Ill. For more details circle #381 on mailing card.

(Continued on page 62)



sets the pace

DuBois . . . combines the conquest of cleaning . . . with the follow-through of service! Creates cleaners for every requirement, provides continuing service with every product!

exclusive, cost-saving 6-point program

- 1 DuBOIS SETS THE PACE with the largest, technically-trained service group in the industry . . . to solve your cleaning problems, help train your personnel in maximum product efficiency.
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- 3 DuBOIS SETS THE PACE creating the most complete line of chemical cleaning compounds . . . serving every phase of your operation.
- 4 DuBOIS SETS THE PACE providing almost a half-century of practical and technical "on-the-job" experience.
- 5 DuBOIS SETS THE PACE giving all the advancements of a research staff dedicated to formulating better cleaners for you.
- 6 DuBOIS SETS THE PACE providing the opportunity to unify all your purchases through one company. The result: greater dollar savings, improved service.



For Schools

Machine and hand dish-washing compounds . . . rinse additives . . . packaging and dispensing devices to control cost . . . floor cleaners and polishes . . . all-purpose cleaners and cleansers for every surface and for problem areas . . . specialized compounds and germicides for sanitized cleaning where hygiene is paramount.

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Library Charging Desk Has "Buffer Bar"

Offered as an optional feature on New Life library charging desks, the "Buffer Bar" and front panel of heavy gauge vinyl resist wear and scratches from school bags, belt buckles, hand bags and the like, to



lengthen the life of the unit and protect its appearance. John E. Sjostrom Co., 1711 N. Tenth St., Philadelphia 22, Pa. For more details circle #382 on mailing card.

Vapo-Fume Insecticide Is Safe, Odorless

Safe for use in kitchens and food storage areas, non-staining, odorless Vapo-Fume insecticide kills resistant as well as non-resistant insects immediately and forms an invisible film that keeps on killing. National Chemsearch Corp., 2417 Commerce, Dallas, Tex.

For more details circle #383 on mailing card.

"Red Goat" Disposer For Multi-Operator Stations

The new "Red Goat" five-hp. model disposer, designed for multi-operator scrapping stations in volume feeding kitchens, has a wide-opening, stainless steel, rectangular hopper for welding to stainless steel sink or table; also available with an aluminum hopper for free standing or non-welded undertable installation. Colerain Metal Products Co., 2021 Eastern Ave., Cincinnati 2, Ohio.

For more details circle #384 on mailing card.



Kool-Lite Overhead Projector Is Lightweight and Quiet

Trimly designed with cool, bright and quiet operation, the new Kool-Lite 6000 Overhead Projector weighs only 40 pounds, accommodates transparencies up to 10 by 10 inches, and holds cellophane rolls which can be used for projection of hand-written notes. Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.

For more details circle #385 on mailing card.

Institutional Shower Mat Has Non-Slip Pattern

Designed especially for institutional use, the new shower mat of soft, durable rubber has a non-slip pattern on the surface, knob back for aeration and 41 perforations for fast drainage. American Mat Corp., 1719 Adams St., Toledo 2, Ohio. For more details circle #386 on mailing card.

(Continued on page 64)

LANGUAGE LABORATORIES

NEW INSTRUMENTS

PROVE HEADSETS NEED NOT BREAK DOWN

The PROFESSIONAL
Model LT-100
Dynamic



The STUDENT
Model LT-500
Magnetic

DYNAMIC or MAGNETIC HEADSETS

MOISTURE-PROOF SHOCK RESISTANT

Dynamic and Magnetic Headsets are rapidly becoming a "standard requirement" in the original installation of language laboratories and as "automatic" replacements for older, less effective, crystal and ceramic type headsets.

Now PM & E's introduction of the Professional Model LT-100 Dynamic and Student Model LT-500 Magnetic headsets provides a new degree of wide range performance and dependability.

Dynamic and Magnetic acoustic principles have created headsets impervious to humidity and guaranteed resistant to concussions that normally put crystal or ceramic headsets out of commission.

The importance of these outstanding features has been universally recognized as Dynamic and Magnetic headsets have become the first to be accepted in every state.

Whether you are considering the initial installation of a language laboratory or replacement of some of your present headsets, ask your acoustic supplier about the superior technical features incorporated in PM & E's new Dynamic or Magnetic headsets . . . features that provide exceptionally long term, maintenance-free operation.

Convenience Feature: The Professional Model LT-100 features convenient and time-saving "in the classroom" cord set replacement.

For complete information on these new headsets and the name of your nearest PM & E supplier, write:

PLASTIC MOLD & ENGINEERING

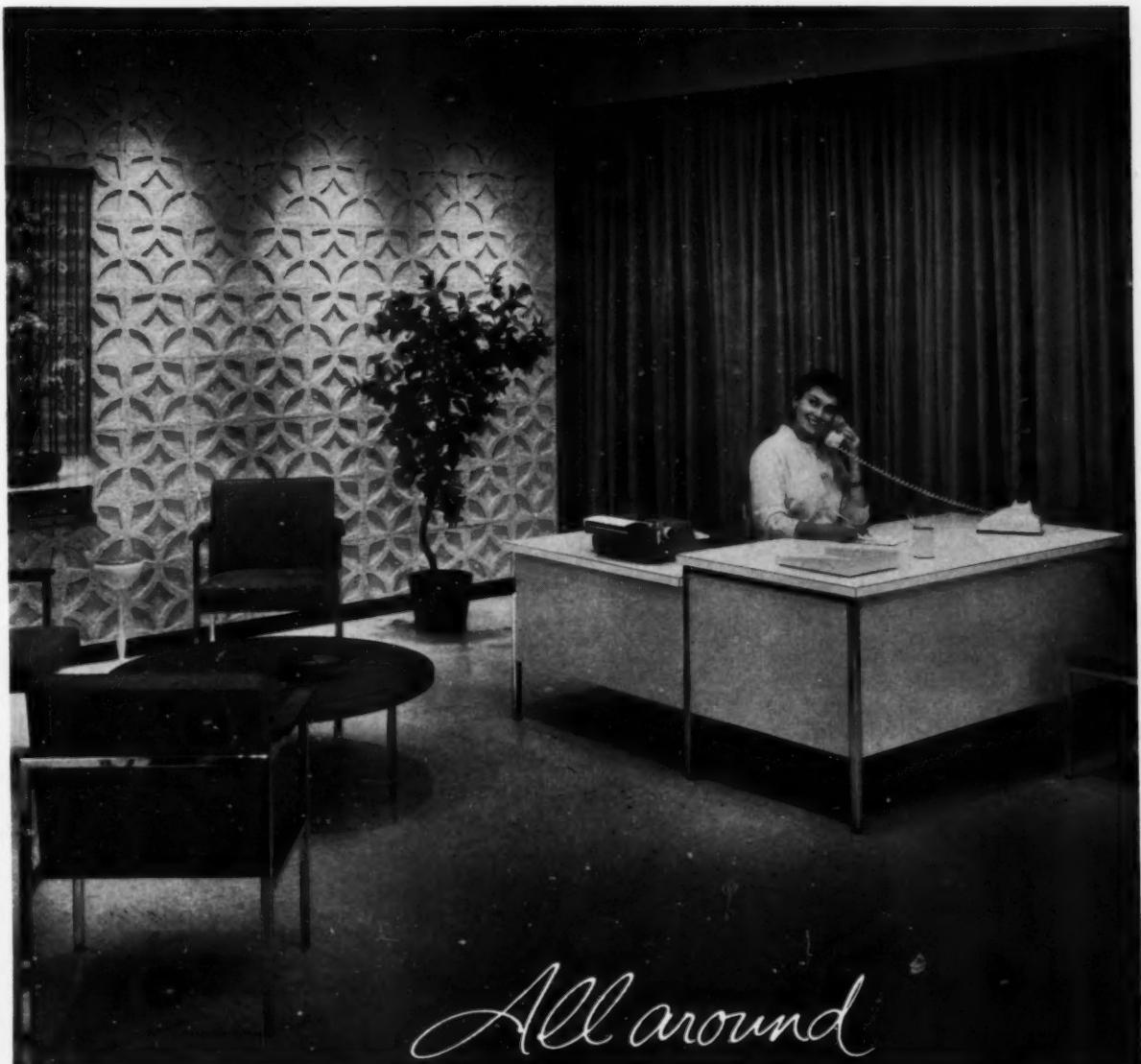
PM & E

Dept. B — P. O. Box 4255

265 Wampanoag Trail

East Providence, Rhode Island

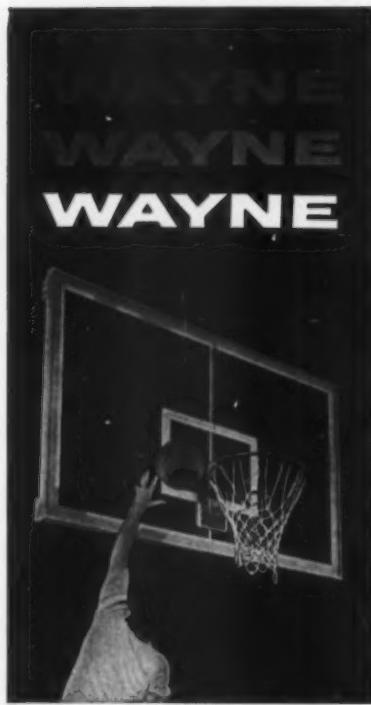
COLLEGE and UNIVERSITY BUSINESS



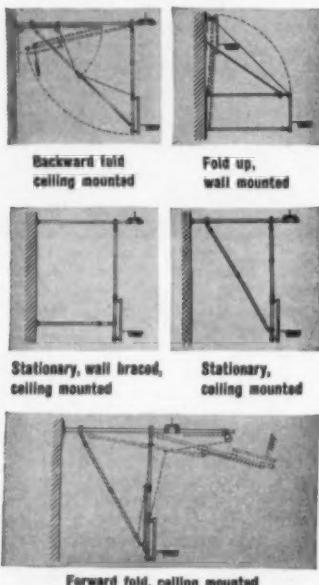
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the campus...*

You see Steelcase furniture in reception areas like this...or, in the president's office, the library and administration buildings, the business office...wherever more than just "adequate" furniture is needed. Steelcase matches beauty with efficiency, comfort with maximum utility. It combines flexibility with durable, almost impossible-to-wear-out fabrics and finishes. Yet, prices are realistic and sensible. These are some of the reasons so many leading colleges and universities consistently specify Steelcase. Shouldn't you? Steelcase Inc., Grand Rapids, Michigan; Canadian Steelcase Co., Ltd., Don Mills, Ontario. ■ Steelcase furniture can be purchased through the E & I Cooperative, 1461 Franklin Avenue, Garden City, New York. Contract — Furniture Number 7.

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Virtually any requirement in basketball backstops, due to structural conditions, can be met from the Wayne line—in many instances without "custom" cost. Wayne offers over 35 basic backstop designs, each with a wide range of adaptability. All meet the standards of the National Basketball Committee, of course. Write for new catalog today.

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Improved Microphones Suited to Audio-Visual Activities



Two new microphones especially suited for use in audio-visual activities are strong and durable, designed to withstand the abuse of classroom use, and afford excellent sound reproduction. The Model 540S Sonodyne II is a small, modern, high output omni-directional microphone at moderate price which provides high intelligibility, dual impedance and an on-off switch. The Model 545S Unidyne III microphone is a unidirectional unit with uniform cardioid pick-up pattern, designed to eliminate or reduce background noise and suitable for public address and recording. Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill.

For more details circle #387 on mailing card.

GF Automatic Coffee Brewer Makes Fresh Coffee Mechanically

Special blends of Maxwell House and Yuban soluble coffee are put in an 18-



package carton, with each package containing enough to make one decanter of coffee in the automatic coffee brewer introduced by General Foods. Coffee of uniform quality is brewed automatically when the decanter is put in place and the lever pressed. The machine is capable of making up to 300 cups of coffee per hour, or as little as one decanter, depending upon the need. General Foods Corp., Institutional Products, White Plains, N.Y.

For more details circle #388 on mailing card.

Versatile Port-A-Serv Is Food Transfer Unit

A portable unit that stores and serves a complete menu in standard steam table pans, the Port-A-Serv is designed for mass feeding operations, has a lower storage area individually heated, and a seamless hot food well with perimeter heating for



the large capacity serving top area. Lincoln Mfg. Co., Inc., 3230 S. Calhoun St., Fort Wayne, Ind.

For more details circle #389 on mailing card.

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**Portable Monitor Consolet
for Language Laboratories**

Twenty student positions can be accommodated on the new model portable Monitor Consolet for language laboratories, with almost no increase in cabinet size and no increase in price. Teaching control facilities include simultaneous transmission of up to three separate programs, private instructor monitoring of each booth and private two-way instructor-student communication, as well as the Monitor Re-



motester for examinations. Electronic Teaching Laboratories, 5034 Wisconsin Ave., N.W., Washington 16, D.C.
For more details circle #390 on mailing card.

**Spartan Rebound Tumbling
Is Finished in Green**

The traditional design and quality features of Nissen rebound tumbling equipment are retained in the completely new line introduced as the Spartan brand. The colorful green finish is electro-statically applied and baked on for permanent finish, all units are portable and fold conveniently for storage, and the Spartan line is available in a choice of three bouncing beds and either plated spring or rubber cable suspension systems. Nissen Trampoline Co., 930 27th Ave., S.W., Cedar Rapids, Iowa.
For more details circle #391 on mailing card.

**Combination Library Unit
Is Compact and Space-Saving**

Occupying a minimum of floor space, the new Stacor Visionaire combination library card-catalog and file is a compact, efficient unit, combining a cornice, a 15-tray card cabinet with snap-rods, and a legal-size drawer unit on a base with tapered, splayed legs. Stacor Visionaire Corp., 223 Vine St., Scranton, Pa.
For more details circle #392 on mailing card.



**Automatic Copier
by Anken, Ozalid and Photek**

Marketed under the name Amptomatic and Transcopy Automatic, Cormac 600 and Contura Executive by the four marketing subsidiaries of Anken, the new jointly-developed fully automatic convenience copying machine, which produces flat, dry prints at the rate of four copies a minute, is called Transfermatic by Ozalid and Consecutor by Photek. Ozalid Div., General Aniline & Film Corp., Johnson City, N.Y.
For more details circle #393 on mailing card.

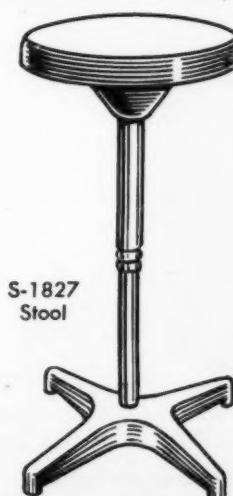
(Continued on page 66)



JUST LIFT SEAT TO DESIRED HEIGHT



Exclusive Ajustrite mechanism guaranteed for 10 years



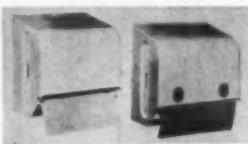
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Nothing could be simpler. Nothing could be faster. Nothing could be cleaner. No dirty knobs or wheels to manipulate. No tools to fuss with. You just lift the seat to the desired height. Thanks to the unique Ajustrite mechanism hundreds of thousands of Ajustrite chairs and stools are in use. 32 different models for schools, laboratories, hospitals, factories, drafting rooms, offices. And now something new: an optional tempered steel backrest that adjusts 5 inches in or out by a turn of a screw and folds down to go under tables. Write for illustrated folders.

AJUSTO EQUIPMENT COMPANY
Bowling Green, Ohio

Two Nibroc Cabinets Feature Towel Reservoir

Two new roll towel cabinets have been added to the Nibroc line of washroom ac-



cessories; Model 4FF, a free-feed type, and model 3CT, a crank type. A reservoir at the bottom allows easy reloading before the units are completely empty, with indicator slots on cabinet sides to show contents. Brown Co., 150 Causeway St., Boston 14, Mass.

For more details circle #394 on mailing card.

Desk-Size Computer With Accounting Machine

An electronic data processing system with alphanumeric capability at reasonable price is offered by Burroughs. It integrates the Series E desk-size computer with a 10-total typewriter accounting machine which eliminates the need for additional units to write descriptive information on accounting forms. "Tri-plex input," which allows data to be fed into the system by adding two punched paper tape readers and a punched card unit, or three tape units, further extends the versatility of the computer. Programmer training requires only a few hours because of the simplified external pinboard command process. Burroughs Corporation, Equipment & Systems Div., Detroit 32, Mich.

For more details circle #395 on mailing card.

Line of Utility Carts Reduces Time-Consuming Trips

Designed for use by custodians to transport towels, tissue and other washroom



supplies, the new line of versatile utility carts offers savings in money and man-hours by reducing return trips to central supply stations. All models are highly mobile on ball-bearing rubber tires, and accommodate mops, brooms, brushes and mopping equipment. White Mop Wringer Co., Fultonville, N.Y.

For more details circle #396 on mailing card.



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size has just been added. Keeps
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Heavy Duty Lab Balance Combines Capacity With Sensitivity

Effective for many laboratory and educational applications, the new Model 1600 Ohaus Heavy Duty Laboratory Balance has an adjustable platform with suspension hook for specific gravity determinations, large stainless steel pans and wide pan bows. Ohaus Scale Corp., 1050 Commerce Ave., Union, N.J.

For more details circle #399 on mailing card.
(Continued on page 68)

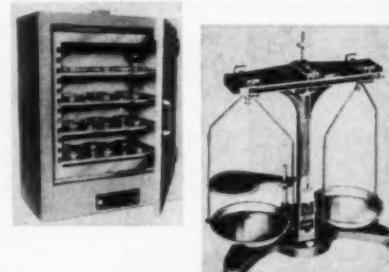
screw terminals, pre-cut jumper leads and templates for 18 completely different projects to be built by students. Superelectronics Corp., 4 Radford Pl., Yonkers, N.Y.

For more details circle #397 on mailing card.

Combination Incubator and Oven Designed for Wall Installation

The "Wall-Cab," a combination Incubator and Embedding Oven only 12 inches deep, may be quickly and easily hung on the wall or set on supporting rods, to save space. Labline, Inc., 3070 W. Grand Ave., Chicago 22.

For more details circle #398 on mailing card.



Heavy Duty Lab Balance Combines Capacity With Sensitivity

Effective for many laboratory and educational applications, the new Model 1600 Ohaus Heavy Duty Laboratory Balance has an adjustable platform with suspension hook for specific gravity determinations, large stainless steel pans and wide pan bows. Ohaus Scale Corp., 1050 Commerce Ave., Union, N.J.

For more details circle #399 on mailing card.
(Continued on page 68)

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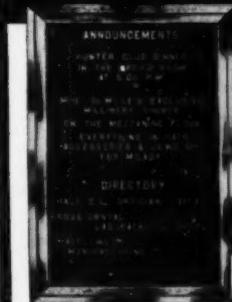
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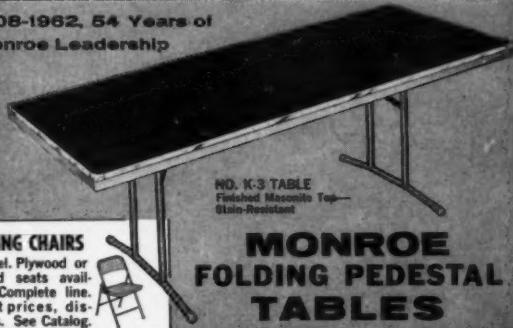
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THE MONROE COMPANY 77 Church St., COLFAX, IOWA

"Train" Mopping Outfits For Large Floor Areas

To cut down on the time required and also to do a better job of keeping large floor areas clean, Geerpres Wringer couples together one of its "Convertible" mop buckets and a standard Twin-Tank outfit with rubber bumpers to form a three-tank "train." The easily moved unit includes a bucket for cleaning solution, one for rinsing and one for wringing out dirty pickup



water, each of which may be used independently. Geerpres Wringer, Inc., P.O. Box 658, Muskegon, Mich.

For more details circle #400 on mailing card.

Royal Scot Papers for Quality Photocopies

With the new contact speed Semi-Gloss paper introduced by Hunter, photographic prints of darkroom quality can be instantly reproduced from film negatives processed in the same Royal Scot copying machines used for office paper work. A companion S. W. Semi-Gloss projection speed photographic paper is also added to the line. Hunter Photo Copyist, Inc., 568 Spencer St., Syracuse 4, N.Y.

For more details circle #401 on mailing card.

Ajustrite Lab Stool Has Folding Backrest



The folding backrest now offered for the Ajustrite Science Laboratory Stool, which permits height adjustment by simply lifting the seat, gives students support at work, yet permits the stool to be pushed under table or bench when not in use, for maximum aisle space. Ajustro Equipment Co., 515 Conneaut St., Bowling Green, Ohio.

For more details circle #402 on mailing card.

Full Line of Lounge Furniture in Modern Design

Modern design, colorful upholstery and frames, and sturdy construction are features of the new Weinberg line of metal lounge furniture, which includes side and straight chairs and chairs in tandem, tables, stools, benches, architectural screens, planters and ash receptacles in a variety of patterns. Frederic Weinberg Co., 145 W. Columbia Ave., Philadelphia 22, Pa.

For more details circle #403 on mailing card.

Stacking Chair for Multi-Purpose Rooms

Created for minimum school budgets, the new ScholarCraft stacking chair, Series No. 150, with frame fabricated of welded tubular steel and seat and back of unbreakable rigid polyethylene, is recommended for multi-purpose rooms as well as for general classroom use. Southeastern Metals Co., 3925 N. 29th St., North Birmingham, Ala.

For more details circle #404 on mailing card.



Combined Fryer Unit for Institutional Kitchens

The new dual-temp 55 programmed fryer combines two or more units, complete with an over-all exhaust hood, banking strips and streamlined leg supports, to handle the need in large institutional kitchens. Each fryer operates independently with fully automatic control for continuous production. Anetsberger Brothers, Inc., 180 N. Anets Drive, Northbrook, Ill.

For more details circle #405 on mailing card.

"Kwik-Sort" Coin Drive Is Accurate, Automatic



Mixed coins are poured through the open top of the new compact, portable "Kwik-Sort" sorting device, and with a few seconds of shaking in a rotary motion, coins drop through the various size holes in each color-keyed coin tray. Block & Co., Inc., Dept. 55, 350 W. Ontario St., Chicago 10.

For more details circle #406 on mailing card.

Up-Right Freezer Features Door Shelves

A self-contained upright freezer, available with manual or automatic defrost, features door shelves which provide up to



30 per cent increase in storage with no increase in overall dimensions, and a blower coil with circular design for maximum air circulation. Silver Refrigeration Mfg. Corp., 1469 Utica Ave., Brooklyn 34, N.Y.

For more details circle #407 on mailing card.

ALBERENE STONE—for 75 years the only permanently satisfactory material for chemical laboratory table tops, shelving, sinks, splash backs, drain boards and fume hoods. Prompt delivery. For FREE literature and technical assistance address: ALBERENE STONE (A DIVISION OF THE GEORGIA MARBLE COMPANY) 386 PARK AVENUE SOUTH, NEW YORK 16, N.Y., DEPT. U.



For safe cleaning of all surfaces, use **SPAL® CONCENTRATE** SOAPLESS DETERGENT

Spal Concentrate is a concentrated, quick-acting soapless detergent which cleans surfaces by removing soil both chemically and mechanically. Spal has great penetration, quickly cuts through dirt, oil and old wax. Soil remains in suspension, rinses away easily. Leaves the surface bright and new-looking.

Spal will not damage any surface which is not harmed by water alone. It works well in hard or soft, hot or cold water; and only a small amount of Spal per gallon of water is needed for any cleaning job. Compare concentration, suds, costs and cleaning results with your present cleaner . . . that's the best way to be sure of the superiority of Spal.



Ask our representative, the Man Behind the Huntington Drum, to demonstrate Spal to you. Write for his name today.

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A. B. Dick Azofax Reduces Duplicating Costs

With Azofax, a new A. B. Dick paper, a carbon copy or original of any form, drawing or tabulation automatically becomes a duplicating master to give multiple, quality copies fast and at an unusually low cost. A. B. Dick Co., 5700 W. Touhy Ave., Chicago 48.

For more details circle #408 on mailing card.

Balomatic 605 Projector Is Semi-Automatic Version

A semi-automatic version of the Balomatic 655 is now available as the 605 at reduced cost but with the same styling



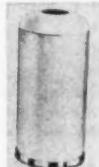
which won the original 1961 Master Design Award. The inexpensive, 40-capacity non-spill slide tray accepts all two by two mounts, intermixed if desired, and the 500-watt CZA Lamp gives brilliant screen illumination. Slide editing is accomplished without removing the tray, and single slides can be shown with no tray. **Bausch & Lomb, Inc., Rochester 2, N.Y.**

For more details circle #409 on mailing card.

Contract Series Chairs in "Mobile Seating" Line

Designed to meet requirements of modern architecture, the Contract Series folding "Mobile Seating" chairs, with choice of 10 metal frame and 15 vinyl upholstery color combinations, have contour and grace with the look of permanent chairs. **Brewer-Titchener Corp., Cortland, N.Y.**

For more details circle #410 on mailing card.



Open Top Receptacle Is Budget Priced

The Open Top Model No. R-32, a budget-priced round waste receptacle, has a centered hole at the top which is safety protected with the metal edge folded under. The lightweight outer shell is easily lifted to empty the inner liner, and a stainless steel base protects floor and finish. **United Metal Receptacle Corp., 27-29 Ocean Ave., Jersey City 5, N.J.**

For more details circle #411 on mailing card.

Outdoor Incinerator Moves on Wheels

The wheel design on the new ten-bushel capacity Alsto outdoor incinerator permits it to be used in strategic locations as a trash receptacle and to be wheeled to a nearby outdoor location for burning. **Alsto Co., 4007 Detroit Ave., Cleveland 13, Ohio.**

For more details circle #412 on mailing card.
(Continued on page 70)



The Insured TUITION PAYMENT PLAN

This is the prepayment plan that brings the parent low-cost life and disability insurance protection, plus a monthly budget provision that extends to the final month of his educational expenses four or more years hence. Used today in many of the best-known colleges and preparatory schools, it has proven most valuable to administrative officers by providing them with a dignified, parent approved method which:

- 1 alerts parents to their financial obligation when the student is accepted for admission;
- 2 offers parents a convenient and logical plan for meeting that obligation;
- 3 assures the parent (and thus the college) that he will have adequate funds with which to meet his college obligations in full and on time;
- 4 preserves the traditional relationship between the college and the parent —debt-free and direct.

Individualized descriptive literature for mailing to the parents of incoming students is furnished for each preparatory school, college or university.

WRITE TODAY FOR DETAILS

We should like to know more about the insured Tuition Payment Plan as it would apply to the student at:

Name of School
or College _____

Address
Please contact: _____

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THIS IDENTIFICATION CARD

carries photo of student and pertinent data precisely as required by your school—all photographed simultaneously during registration. Master (IBM) card is your own form, designed by you but furnished by us—inserted into Duo-lens camera and reproduced photographically. No mistakes or alterations possible. Two hundred or even more photos can be made per hour with each camera. Can be plastic laminated as well as embossed for charge-card use in library, book store, student center, etc. Color codes provide further special identification.

We furnish cameras on your premises, all materials and personnel. Service covers late registrations and subsequent registrations, replacement of lost cards and duplicates for personnel folder or Rolodex File which we supply free.

This low-cost ID card is fool-proof, simple, and the system is flexible to meet every requirement.

**WRITE OR PHONE COLLECT
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Literature and Services

- A six-page catalog from Bastian-Blessing Co., 4203 W. Peterson Ave., Chicago 46, illustrates in color the bright new Fiesta line of soda fountains and fast food service units.

For more details circle #413 on mailing card.

- The 40-page, completely revised Catalog SCC-61 on Sectional Cafeteria Counters available from Southern Equipment Co., 4550 Gustine Ave., St. Louis 16, Mo., is fully illustrated and designed to be a comprehensive specifying guide for selection of cafeteria counters.

For more details circle #414 on mailing card.

- Full information on the new Fourstep Wash-Wax System and Tristep Wash System developed by Market Forge Co., Everett, Mass., is presented in their Floor Cleaning Systems and Equipment Catalog. Information on the DoAll Mopping Systems, bucket trucks and other items in the Green Label line is also presented.

For more details circle #415 on mailing card.

- Specifications, construction features and other pertinent data on the new "Custom Lab" line of heavy duty steel laboratory furniture recently introduced by Burroughs Mfg. Co., Kalamazoo, Mich., are presented in a 38-page plastic-bound catalog. Descriptive details and photographs of the wide line of base units, cabinets, cases, tables, and fume hoods are included.

For more details circle #416 on mailing card.

- Folder DH-205 entitled Page Campus Fence, available from Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa., illustrates and describes the various styles of Page Fence for schools, institutions, playgrounds, athletic fields and tennis courts, plus other relevant information.

For more details circle #417 on mailing card.

- The fifth edition of the "New Measure for All Masonry" manual published by Stark Ceramics, Inc., P. O. Box 230, Canton 1, Ohio, presents full technical data and specifications on Structural Glazed Facing Tile. Included are drawings and dimensions of all tile shapes and sizes.

For more details circle #418 on mailing card.

- Available to administrators, business managers and architects from the Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio, the new 16-page manual on "Electrical Wiring Flexicore Cells" explains the use of hollow-core precast concrete floor and roof slabs as raceways.

For more details circle #419 on mailing card.

- A new 12-page, fully illustrated catalog on the complete line of Corbin Cam Locks, available from the Corbin Cabinet Lock Div. of the American Hardware Corp., New Britain, Conn., features locking devices adaptable to metal, wood or plastic in panel, drawer and cabinet installations.

For more details circle #420 on mailing card.

- How the packaging and pre-preparation of Heat-in-Pouch Foods was developed, the advantages of this system and foods available are subjects covered in a release prepared by Modern Foods Council, 333 N. Michigan Ave., Chicago 1.

For more details circle #421 on mailing card.

**Famous Harco
LIFT-LOK**
Chairs and Stools

HARCO



**Write, Wire
or Call for
FREE
30 day trial
and details**

Over 25 styles and sizes of chairs and stools available. Equipped with the famous "Lift-Lok" mechanism.

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**MATCHING CHAIRS AND STOOLS
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The all NEW exclusive "Lift-Lok" adjustment automatically adjusts the seat for persons of all heights. From its lowest position to the desired height simply lift up seat and seat will automatically lock.

SIMPLE — INSTANT — POSITIVE



"LIFT-LOK"
Posture Chairs And
Stools By
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Over 25 models of completely adjustable chairs and stools with height adjustment.

**Write for Free Catalog and Price List
FULL 12 YEAR GUARANTEE ON
ALL HARCO CHAIRS AND STOOLS**

GARRETT TUBULAR PRODUCTS, INC.
P.O. BOX 237 — DEPT. CUB GARRETT, INDIANA

- A 4-page glossary covering Functions, Learning Terms and Tape Recording Terms of a language laboratory is available from Switchcraft Inc., 5555 N. Elston Ave., Chicago 30, to provide a mutual understanding between technicians, teachers and school purchasing agents.

For more details circle #422 on mailing card.

- Bulletin 2725 gives specifications and photometric data on the new quartz-beam floodlight, introduced by Crouse-Hinds Co., Wolf at 7th N., Syracuse 1, N. Y., which can be used wherever long lamp life and efficiency are desired.

For more details circle #423 on mailing card.

- Based on the "Modern Sandwich Methods" Manual prepared by Consumer Service Dept. of the American Institute of Baking, 400 E. Ontario St., Chicago 11, a colorful new 35 mm. sound filmstrip is now available. It provides helpful suggestions for large scale sandwich production, and a mimeographed copy of the script is supplied for use with a silent projector.

For more details circle #424 on mailing card.

- Institutionally tested, quantity recipes describing varied new uses of rice as a main dish with meat and fish, in salads and in desserts are available in a packet from the Rice Council, 2171 Portsmouth St., Houston 6, Tex. The file-size cards show color photographs of the finished dish on one side, while the detailed recipes and menu appear on the reverse.

For more details circle #425 on mailing card.
(Continued on page 72)

"Since 1830 makers of furniture for public use."

4614—metal legs.
Available with wood legs.

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THONET INDUSTRIES INC.
One Park Avenue, New York 16, N.Y.

Showrooms: New York, Chicago, Detroit, Los Angeles, San Francisco,
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SQUARE TWIN COFFEE URNS

New, modern design with removable lift-out stainless steel liners. Two Thin and two Short Line models available in Twin 3 and Twin 5 gallon capacities. Write.



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SPECIALIZED ENGINEERING FOR INSTITUTIONS

PLANNING, DESIGN AND SUPERVISION OF
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Bassick nylon glides

can't stain, even in the rain

No matter how damp the climate is, Bassick nylon-based furniture glides can't rust...can't corrode...can't stain floors or the lightest colored fabrics.

They slide more easily, too, because of the friction-free, easy-sliding properties of nylon.

Nylon glides are just one of the many glides in the Bassick family. All Bassick glides are good for killing clatter, stopping noise, making classrooms quieter, making furniture easier to move for teacher and students alike. Try them in your school.

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THE BASSICK COMPANY,
Bridgeport 5, Conn.
In Canada: Belleville, Ont.



- A revised semi-technical folder, "How to Reduce Glare, Brightness and Solar Heat," produced by Libbey-Owens-Ford Glass Co., 811 Madison Ave., Toledo 1, Ohio, contains data on the company's Parallel-O-Grey and Heat Absorbing plate glasses and Heat Absorbing and Parallel-O-Grey Thermopane insulating glass.

For more details circle #426 on mailing card.

- Helpful information on foods is presented in the Sexton Food Serving Chart prepared by John Sexton & Co., 4501 W. 47th St., Chicago 32. Complete charts on the foods, listed under type classifications, show approximate net weight of foods in containers, suggested portions and costs per serving, and miscellaneous information.

For more details circle #427 on mailing card.

- Information on fallout shelters, with data on requirements for effective protection, is available from the Structural Clay Products Institute, 1520 18th St., N.W., Washington 6, D.C. How brick or structural clay tile are used to provide adequate shelters is discussed in a leaflet offered by the Institute.

For more details circle #428 on mailing card.

- Detailed instructions designed to help choral directors win recognition and community support for choral groups and glee clubs are presented in a booklet published by E. R. Moore Co., 932 W. Dakin St., Chicago 13, for free distribution to choral directors. Entitled "Winning Public Support for the School Choral Group," it lists proved methods of raising funds for the singing group, gives ideas for relations with the press, and includes sample news releases.

For more details circle #429 on mailing card.

- A chart showing net weights of fresh produce in principal types of containers delivered to institutions is now available at 25 cents per copy from the United Fresh Fruit & Vegetable Assn., 777 14th St., N.W., Washington 5, D.C. The four-page bulletin covers 24 categories of fruits and 39 of vegetables, and was prepared by R. A. Seelig, Dir. of Information, to assist institutional food buyers.

For more details circle #430 on mailing card.

- Bulletin No. 1275 from Orr & Sembower, Inc., Reading, Pa., describes and illustrates the new Powermaster Positive Flow Boiler which features positive circulation design, hinged front and rear covers and hinged dry back and optional wet back construction. Sizes, ratings and dimensions are also included.

For more details circle #431 on mailing card.

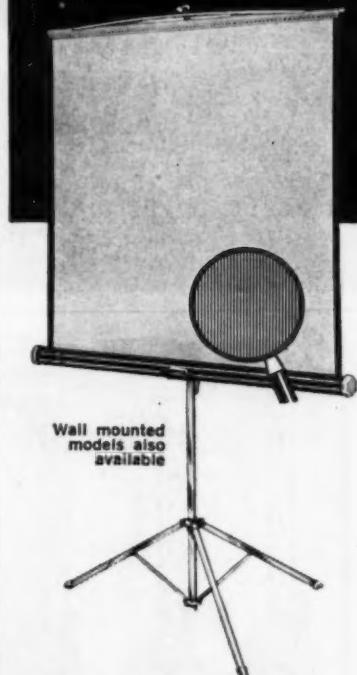
Suppliers' News

American Cyanamid Co., New York, announces acquisition of Wasco Chemical Co., Inc., Cambridge, Mass., manufacturer and distributor of acrylic plastic products for construction.

Campbell Soup Company, Camden 1, N.J., manufacturer of food products, announces a new policy in regard to institutional sales, including the formulation and packing of special and exclusive products to meet the needs of quantity food service, with a separate research group working entirely on this problem. Seven new institutional products are now available.

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Only Da-Lite offers Wonder-Lite, the patented silver lenticular surface which gives superb picture reproduction even in undarkened rooms. Optically correct, with controlled light distribution, widest possible viewing angles. Available in heavy duty tripod or wall mounted models, sizes 40"x40" through 70"x70", built for rugged service.

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